705
RECEIVER

SERVICE MANUAL

705 RECEIVER

NAD

NAD-00065

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Service Instructions

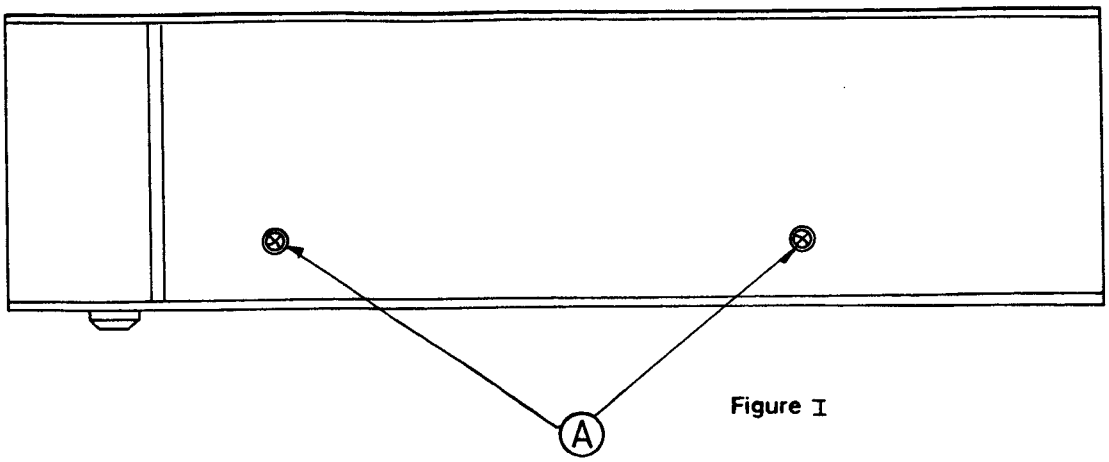


Figure I

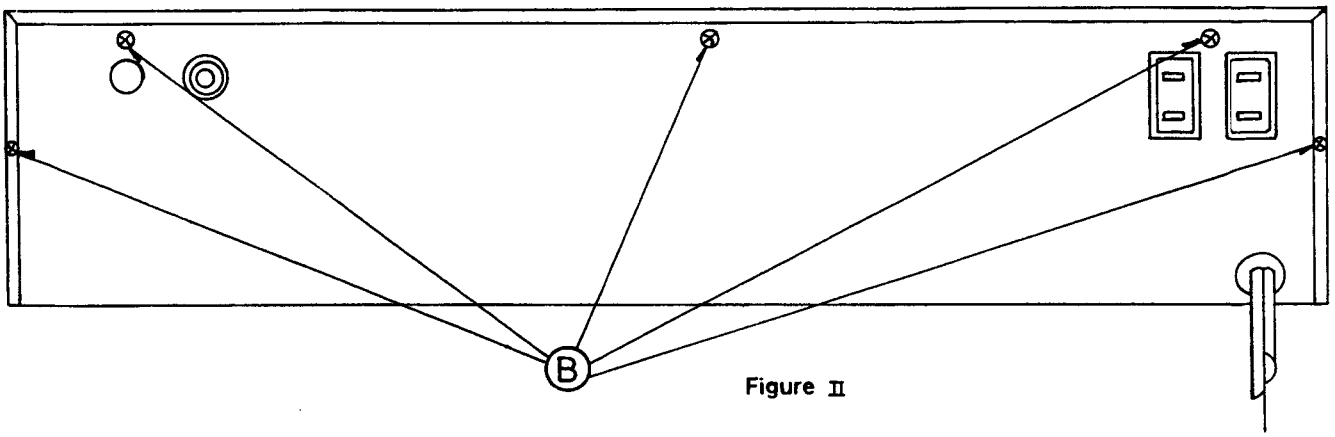


Figure II

TO REMOVE TOP COVER

1. Remove 4 screws (A) from the left and right sides of the top cover. (See figure I)
2. Remove 5 screws (B) from the rear panel. (See figure II)
3. Top cover can now be removed.

SPECIFICATIONS
NAD 705 STEREO RECEIVER

Standard Test Conditions
Reference Output: 1.0W Into 8 ohm Load
AM Antenna: Firsthand Input
FM Antenna: 75 ohm Balanced
FM Standard Signal: 1 kHz, 75 kHz Deviation At 98 MHz

AM TUNER SECTION

Tuning Range	: 522 kHz-1611 kHz (520 kHz-1610 kHz)
Intermediate Frequency Sensitivity	: 450 kHz
20dB Quieting Sensitivity	: 5uV
IF Rejection	: 35dB
S/N Ratio 1.0mV Input	: 50dB
T.H.D. 1.0mV Input	: 0.3%
AM Stop Sensitivity (At 1000 kHz)	: 50dB

FM TUNER SECTION

Tuning Range	: 88 MHz-108 MHz
Intermediate Frequency	: 10.7 MHz
50dB Quieting Sensitivity	: 1.4mV
IF Rejection	: 90dB
S/N Ratio 1mV Input 75 kHz DEV.	: 80dB
MPX Separation (At 1 kHz)	: 50dB
MPX S/N Ratio 1mV	: 77dB
FM Stop Sensitivity (At 98 MHz)	: 30dB

PRE-AMPLIFIER SECTION

Sensitivity At 1 kHz Output=1V		: 180mV
Frequency Response		: 0dB
Loudness Control (20 Hz)		: +12dB
Volume=30dB	(20 kHz)	: +4dB
Base 1	Boost (50 Hz)	: +9.5dB
	Cut (50 Hz)	: -9.5dB
	Boost (10 kHz)	: +7.0dB
Midrange	Cut (10 kHz)	: -7.0dB

POWER AMPLIFIER SECTION

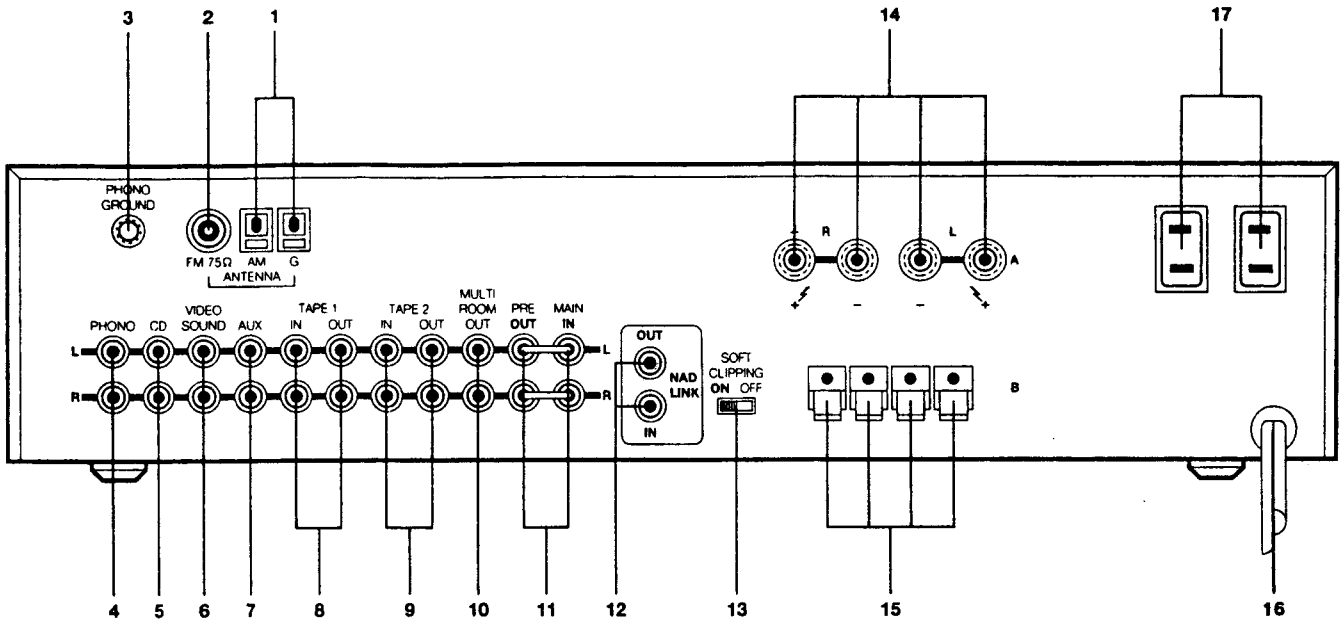
Rated T.H.D.	: 0.01%
Channel Separation (At 10 kHz)	: 70dB
Sensitivity At 1 kHz For 40W Output	: 1.05V
Frequency Response 20 Hz	: +0dB/-1.0dB
50-20 kHz	: 0±0.5dB
S/N Ratio 1W Output A-WTD	: -102dB
Damping Factor At 50 Hz, output=1W	: 70
0.03% T.H.D. Power Output At 8 ohm Load	: 44W

PHYSICAL SPECIFICATIONS

Width x Height x Depth	: 42x9.5x28.5 cm 16.5x3.7x11.2 inch
Net Weight	: 6kg (13.2 lbs)
Supply Voltage	: AC 230V, 50Hz (For UK, VDE, SAA VERSION) AC 115V, 60Hz (For UL Version)

REAR PANEL CONNECTIONS

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



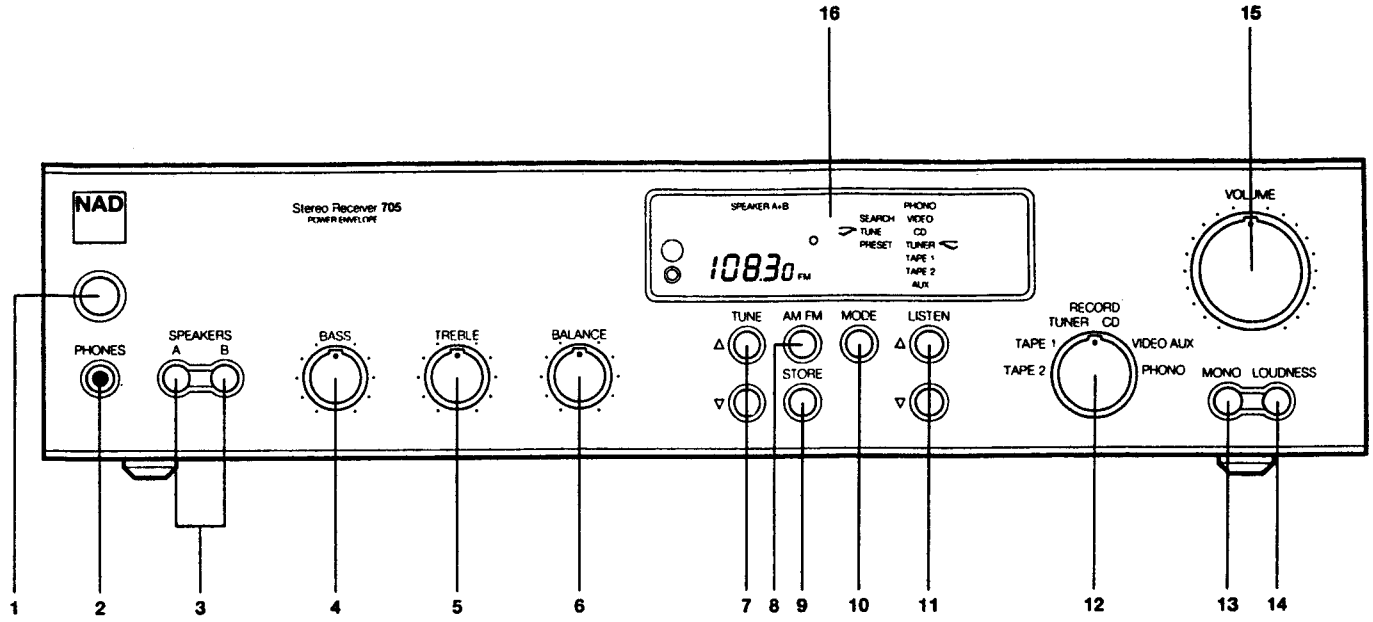
The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance

REAR PANEL CONNECTIONS

1. **AM ANTENNA TERMINALS.**
2. **FM ANTENNA INPUT.**
3. **PHONO GROUND.**
4. **PHONO INPUT.**
5. **CD INPUT.**
6. **VIDEO SOUND INPUT.**
7. **AUX (AUXILIARY INPUT).**
8. **TAPE 1 IN/OUT.**
9. **TAPE 2 IN/OUT.**
10. **MULTI-ROOM OUTPUT.**
11. **PREAMP OUT/MAIN IN.**
12. **NAD LINK IN/OUT.**
13. **SOFT CLIPPING.**
14. **"A" SPEAKER TERMINALS.**
15. **"B" SPEAKER TERMINALS.**
16. **AC POWER CORD.**
17. **AC OUTLETS**

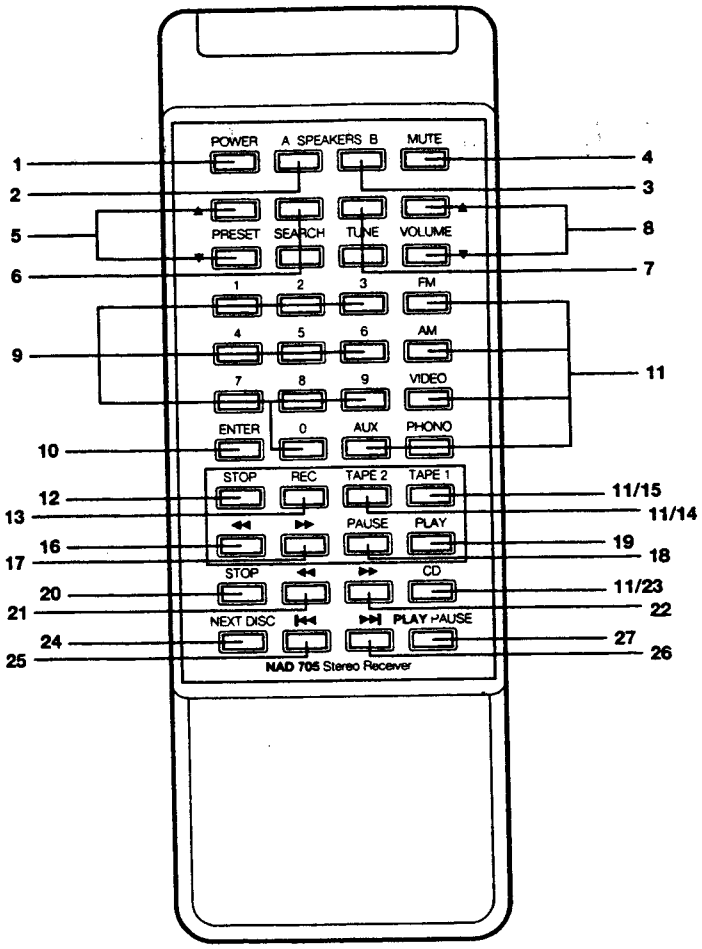
FRONT PANEL



FRONT PANEL CONTROLS

1. **POWER.**
2. **PHONES.**
3. **A/B SPEAKER SELECTOR.**
4. **BASS.**
5. **TREBLE.**
6. **BALANCE.**
7. **UP/DOWN TUNING.**
8. **AM/FM SELECT.**
9. **STORE PRESET.**
10. **TUNING MODE.**
11. **LISTEN (CHOOSE INPUT FOR LISTENING)**
12. **RECORD (CHOOSE INPUT FOR RECORDING)**
13. **MONO.**
14. **LOUDNESS COMPENSATION.**
15. **VOLUME.**
16. **DISPLAY.**

REMOTE CONTROL TRANSMITTER



CD PLAYER CONTROLS

The following buttons operate the corresponding functions on certain NAD compact disc players.

20. Stop.
21. << (Scan Back).
22. >> (Scan Forward).
23. CD. Selects the receiver's CD input for listening.
24. Next Disc. Selects the next disc in a CD changer.
25. |<< (Skip Back).
26. >>| (Skip Forward).
27. Play/Pause.

BATTERIES.

Batteries must be installed before the remote control can be used. In the future, if the receiver does not respond to remote commands, the batteries may be weak and should be replaced. The unit requires two 1.5-volt AA-size (or R6) penlight cells. Alkaline cells are recommended, for maximum operating life.

To open the battery compartment, press the small release lever between the ribbed areas on the back of the handset. When installing fresh AA cells, take care to orient them as shown on the diagram within the compartment.

REMOTE CONTROL

Since the 705 remote is a multi-product controller, its buttons are arranged by product category.

RECEIVER CONTROLS

1. Power. This button duplicates the function of the green Power On/Off button on the front of the receiver. Press to switch on the power. Press again to switch off the power, leaving the receiver in Standby mode.
2. Speakers A. Press to engage or disengage the "A" speakers.
3. Speakers B. Press to engage or disengage the "B" speakers.
4. Mute. Press to shut off the sound temporarily, when you want to answer the telephone for example. (A little sound may still be audible.) Press MUTE again to restore the sound to its previous volume level.
5. Preset Up/Down. Skips to the next higher or lower numbered preset station.
6. Search Up/Down. Auto-seek tuning; scans up or down in frequency and stops at the next strong station.
7. Tune Up/Down. Tunes up or down in frequency by small steps. These buttons also alter the preset number when you are storing frequencies in the presets.
8. Volume Up/Down. These buttons activate a small motor to rotate the receiver's Volume control.
9. Numeric Keypad (0 to 9). Press these buttons to enter a preset number or a tuning frequency. Then press ENTER to tell the receiver that you have completed your selection. The tuning logic recognizes two-digit entries as preset numbers and 3 to 5 digit numbers as broadcast frequencies. If the entry is invalid (e.g. a preset number above 39), the tuned frequency will not change.
10. Enter. Press this button to complete a numeric keypad entry.
11. Input Select (FM, AM, Video, Phono, Aux, Tape 1, Tape 2, CD). These white buttons select the input for listening.

TAPE RECORDER CONTROLS

These buttons operate the corresponding functions on certain NAD tape recorders.

12. Stop.
13. Rec (Recording).
14. Tape 2. Selects the receiver's Tape 2 input for listening.
15. Tape 1. Selects the receiver's Tape 1 input for listening.
16. << (Rewind).
17. >> (Fast Forward).
18. Pause.
19. Play.

TUNER ADJUSTMENT POINTS

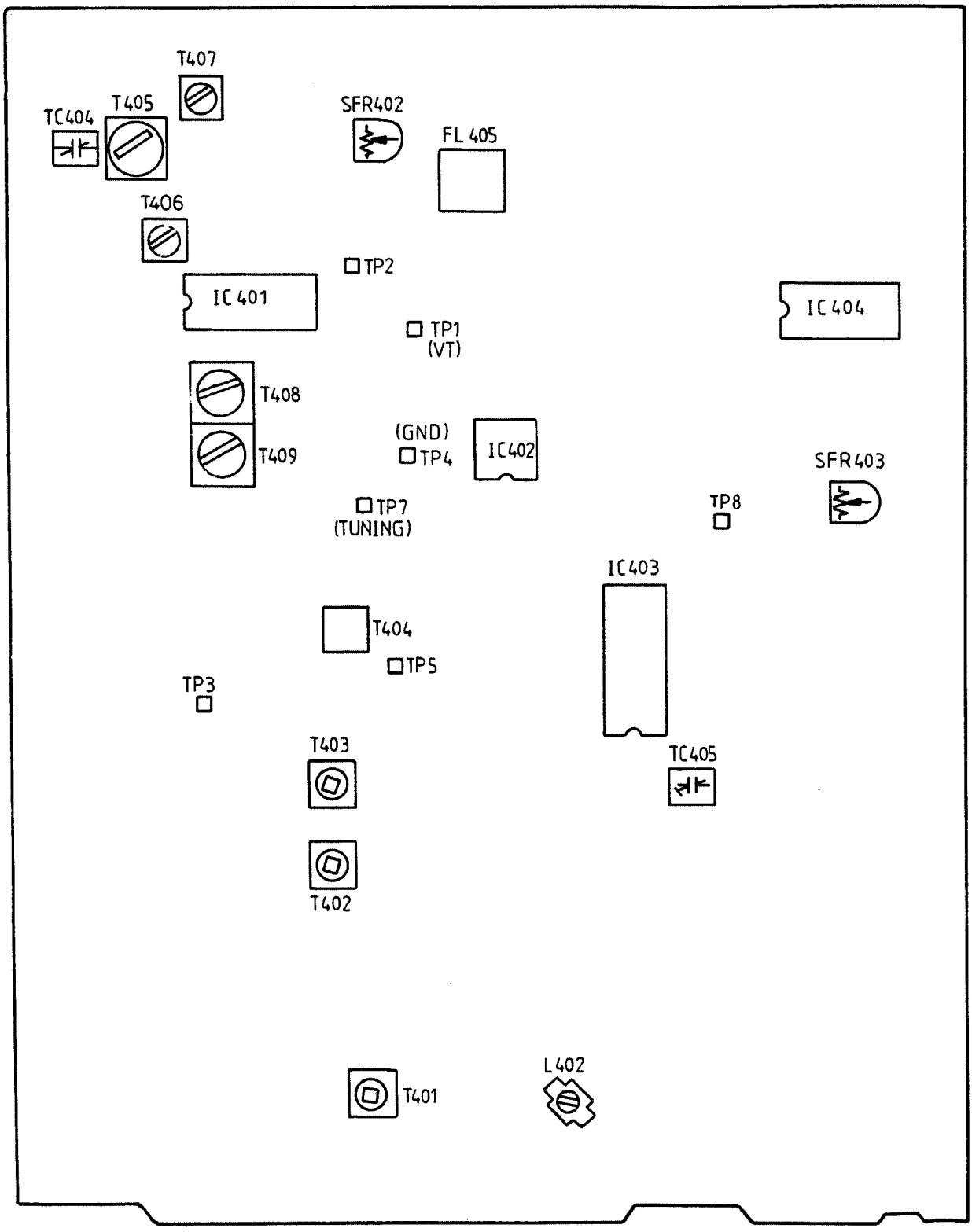


Figure 1

MAIN ADJUSTMENT POINTS

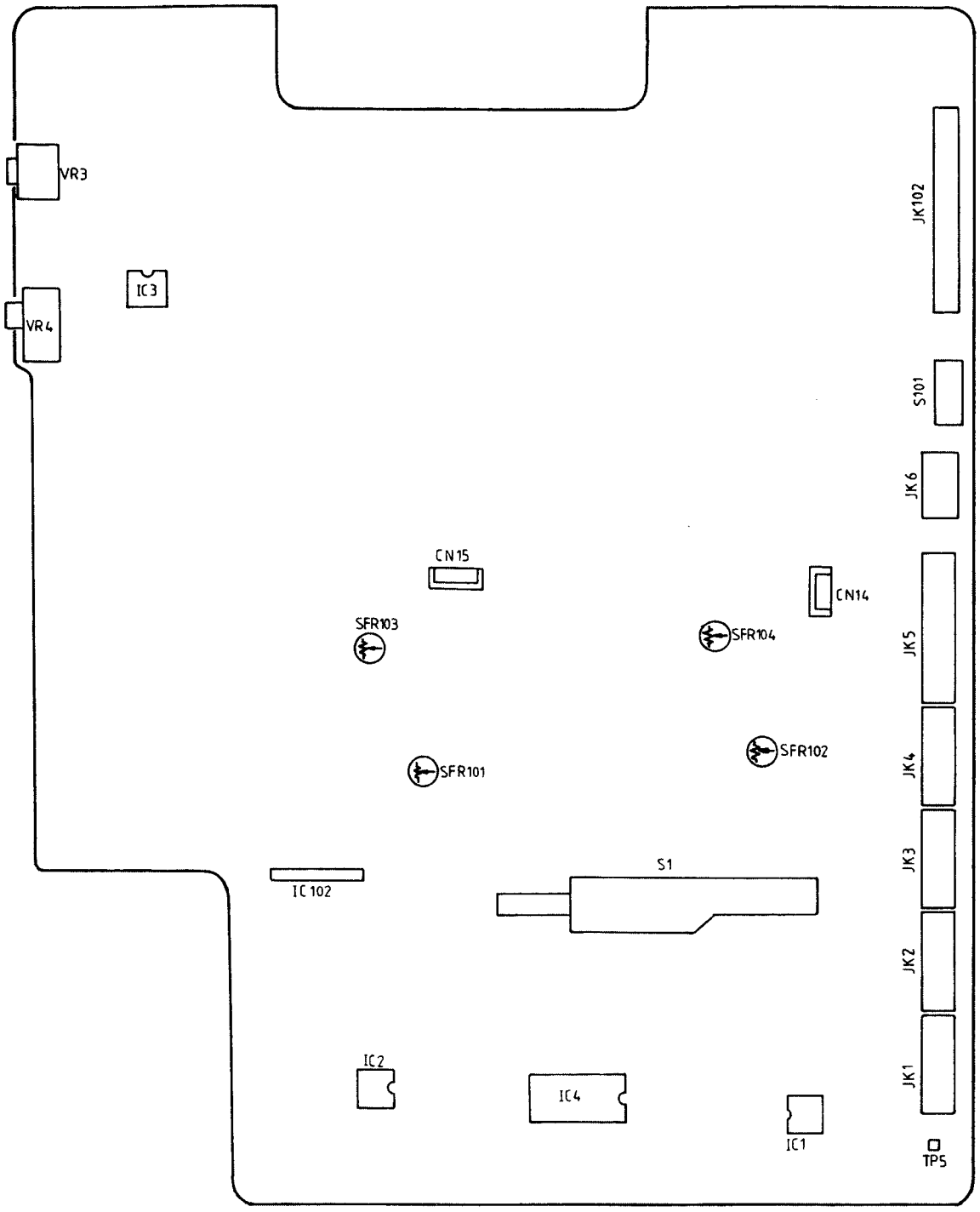


Figure 2.

Amplifier Section

1. Power output offset adjustment
   a. At open load, DC meter connected to speaker terminal A, speaker switch to "A" position.
   b. Adjust SFR101,let the reading as 0+-25mV.(L-channel). (Fig. 2)
   c. Adjust SFR102,let the reading as 0+-25mV.(R-channel). (Fig. 2)

2. Quiesent Current Adjustment
   a. Allow at least 3 minutes burn in before performing this adjustment.
   b. At open load,DC meter connected to CN-15 base. (Fig. 2)
   c. Adjust SFR103,let the reading as 4.4mV. (I=20mA,+-5mA),(L-channel) (Fig. 11)
   d. At open load,DC meter connected to CN-14 base. (Fig 2)
   e. Adjust SFR104,let the reading as 4.4mV. (I=20mA,+-5mA), (L-channel) (Fig. 11)

INSTRUMENTATION CONNECTION DIAGRAM

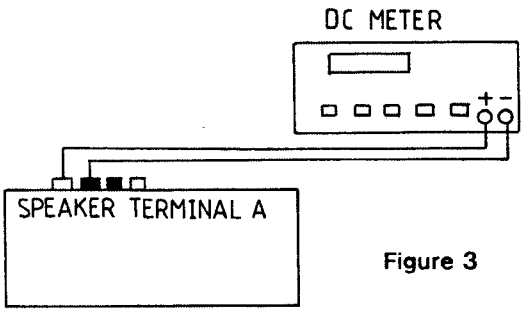


Figure 3

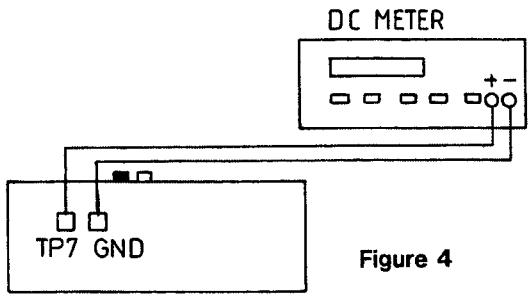


Figure 4

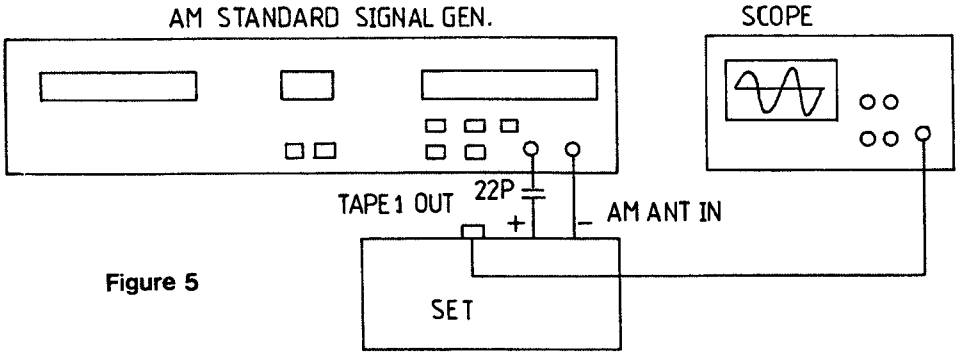


Figure 5

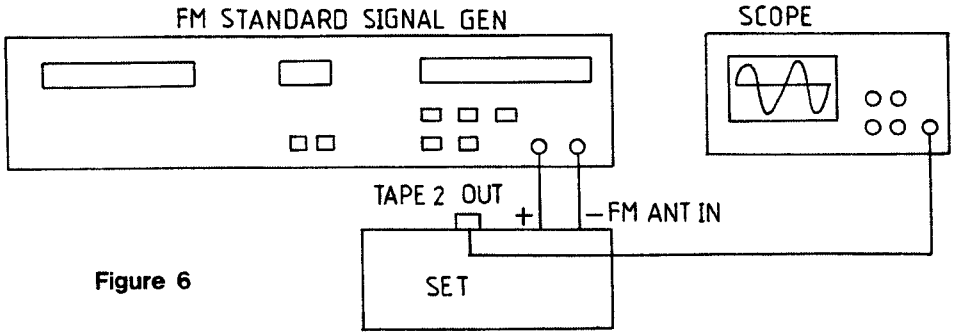


Figure 6

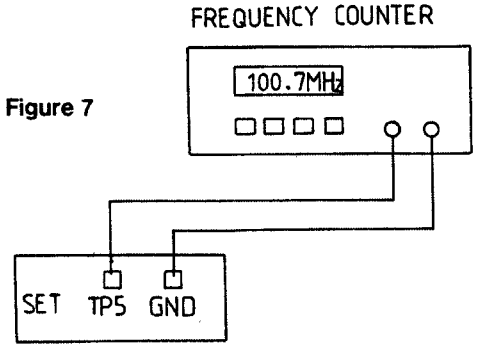


Figure 7

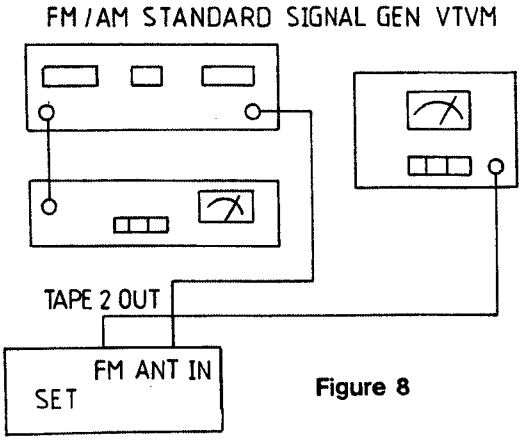


Figure 8

INSTRUMENTATION CONNECTION DIAGRAM (Cont)

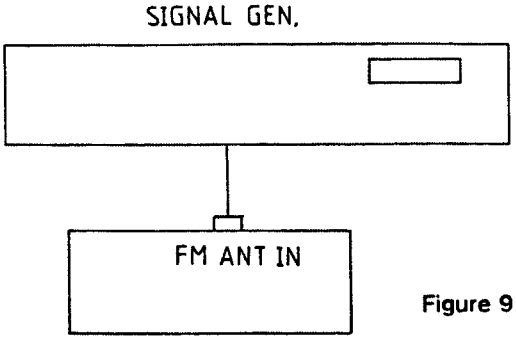


Figure 9

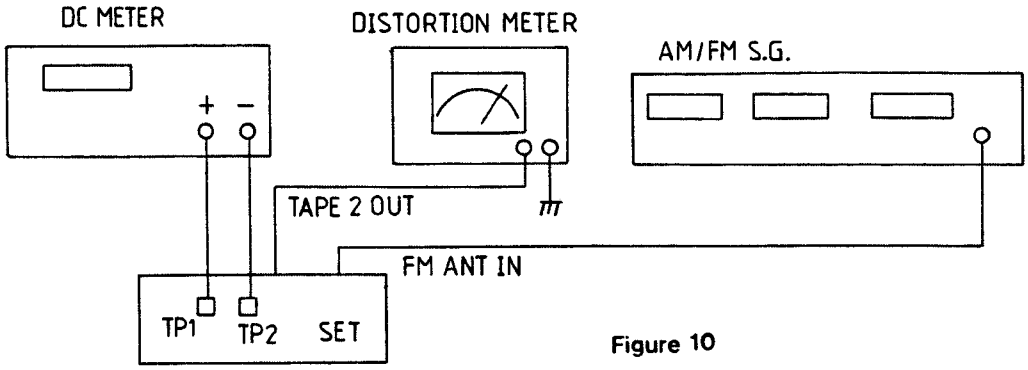


Figure 10

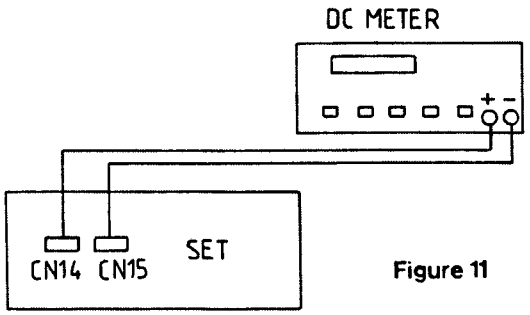


Figure 11

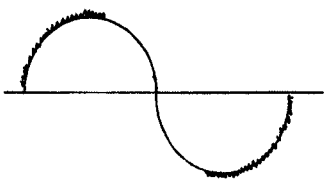


Figure 12

ADJUSTMENT PROCEDURE

A: AM SECTION

1. V.C.O. ADJUSTMENT.

A. MEASURE THE VOLTAGE BETWEEN TP7 AND TP4 (GROUND). (FIG 4).
B. SELECT AM MODE, AND SET THE UNIT UNDER TEST TO 520 KHZ (UL, CSA). (522 KHZ UK, AY, EU).
C. ADJUST T406 UNTIL THE VOLTAGE BETWEEN TP7 AND TP4 IS IN THE RANGE 0.9 V TO 1.1 V.
D. SET THE UNIT UNDER TEST TO 1610 KHZ (UL, CSA) (1611 KHZ UK, AY, EU). CHECK THAT THE VOLTAGE BETWEEN TP4 AND TP7 IS IN THE RANGE 7.35 V TO 7.65 V.

2. SENSITIVITY ADJUSTMENT.

A. CONNECT THE UNIT UNDER TEST AS SHOWN IN FIG. 5. MAKE SURE THAT THE SIGNAL GENERATOR IS CONNECTED VIA A 22P CAPACITOR.
B. SET THE SIGNAL GENERATOR AND UNIT UNDER TEST TO 600 KHZ (UL, CSA) (603 KHZ UK, AY, EU), 30dBUv.
C. ADJUST T405 FOR MAXIMUM OUTPUT LEVEL.
D. SET THE SIGNAL GENERATOR AND UNIT UNDER TEST TO 1400KHZ (UL, CSA) (1404 KHZ UK, AY, EU).
E. ADJUST TC404 FOR MAXIMUM OUTPUT.

3. IF TRACKING

A. USING THE TEST SET-UP DESCRIBED ABOVE (FIG. 5) SET THE SIGNAL GENERATOR AND UNIT UNDER TEST TO 600 KHZ (UL, CSA) (603 KHZ UK, AY, EU), 30dBUv.
B. ADJUST T407 FOR MAXIMUM OUTPUT.

B: FM SECTION.

1. V.C.O. ADJUSTMENT.

A. CONNECT A DC VOLTMETER TO TP7 AND TP4 (GND) (FIG. 4).
B. SET THE UNIT UNDER TEST TO 87.5 MHZ FM MODE.
C. ADJUST L402 UNTIL THE VOLTAGE MEASURED IS IN THE RANGE 3.0 V TO 3.1 V.
D. SET THE UNIT UNDER TEST TO 108 MHZ. CHECK THE VOLTAGE MEASURED IS IN THE RANGE 22 V TO 25 V.

2. 7.2 MHZ REFERENCE FREQUENCY ADJUSTMENT.

A. CONNECT A FREQUENCY COUNTER TO TP5 (FM OSC) AND GROUND (FIG 7).
B. SET THE UNIT UNDER TEST TO 90 MHZ FM MODE.
C. ADJUST TC405 FOR A MEASURED FREQUENCY OF 100.7 MHZ +/- 3HZ.

ADJUSTMENT PROCEDURE (Cont.)

3. SENSITIVITY ADJUSTMENT

A. SET THE SIGNAL GENERATOR AND UNIT UNDER TEST TO 98MHZ FM MODE. CONNECT THE SIGNAL GENERATOR TO THE FM INPUT JACK (FIG 6). SET THE SIGNAL GENERATOR OUTPUT TO 6dBuV, 1 KHZ MODULATION.
B. CONNECT AN OSCILLOSCOPE TO TAPE 2 OUTPUT.
C. ADJUST T401, T402, T403 FOR MAXIMUM OUTPUT. REDUCE THE SIGNAL GENERATOR OUTPUT LEVEL IF NECESSARY.

4. IF TRACKING.

A. SET THE SIGNAL GENERATOR AND UNIT UNDER TEST TO 98MHZ FM MODE, 60 dBuV.
B. MEASURE THE VOLTAGE BETWEEN TP1 AND TP2. (FIG 10).
C. ADJUST T408 UNTIL THE VOLTAGE IS IN THE RANGE -50mV TO +50mV.
D. MONITOR THE DISTORTION FROM THE SIGNAL AT TAPE 2 (FIG 10).
E. ADJUST T409 FOR DISTORTION UNDER 0.15%.
F. REPEAT FROM (C) ABOVE UNTIL THE OPTIMUM DISTORTION HAS BEEN ACHIEVED.

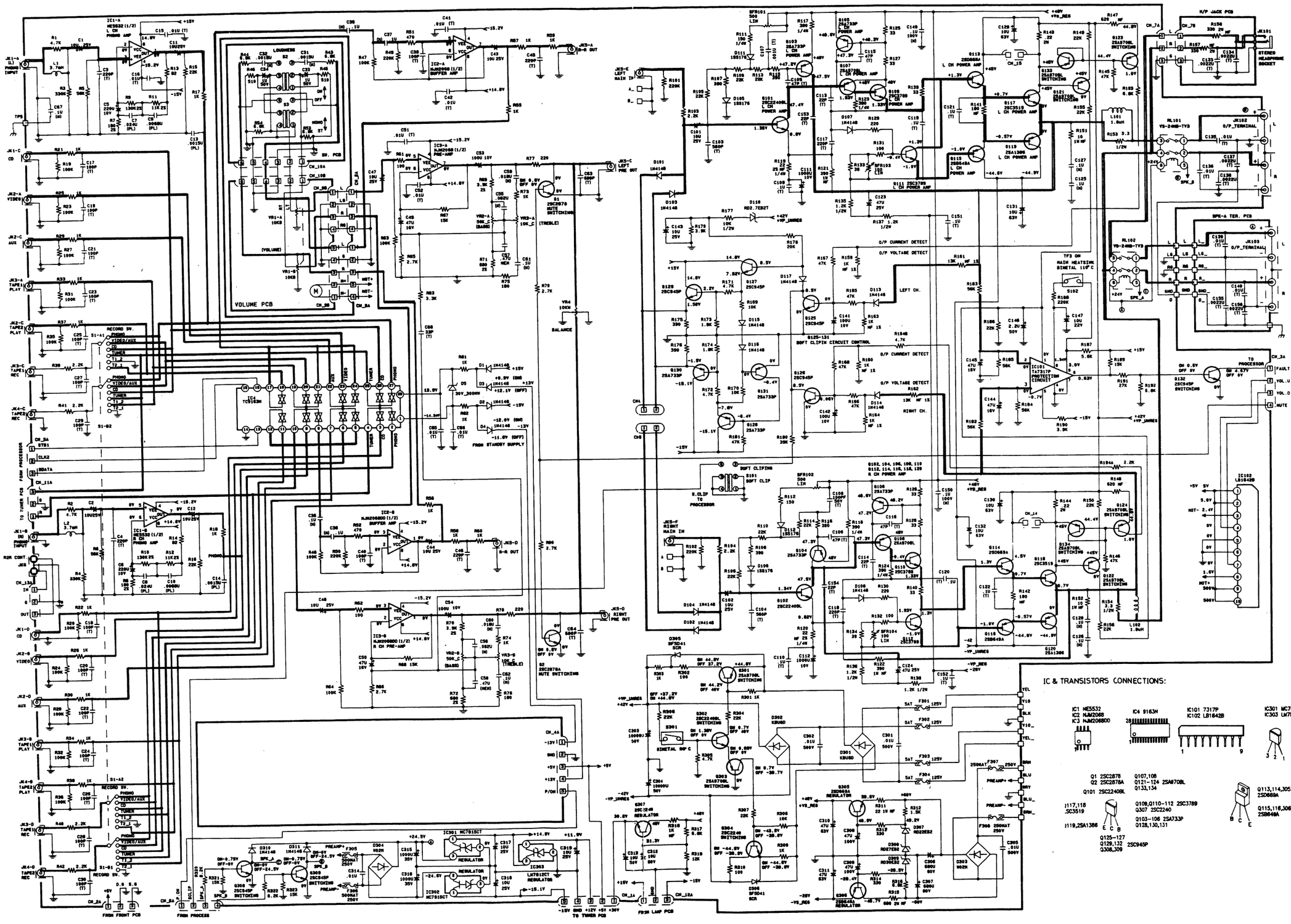
5. SIGNAL METER ADJUSTMENT.

A. SET THE SIGNAL GENERATOR AND UNIT UNDER TEST TO 98MHZ FM MODE, 60 dBuV.
B. ADJUST SFR402 UNTIL THE LAST SEGMENT OF THE SIGNAL METER JUST LIGHTS UP.

6. SEPARATION ADJUSTMENT.

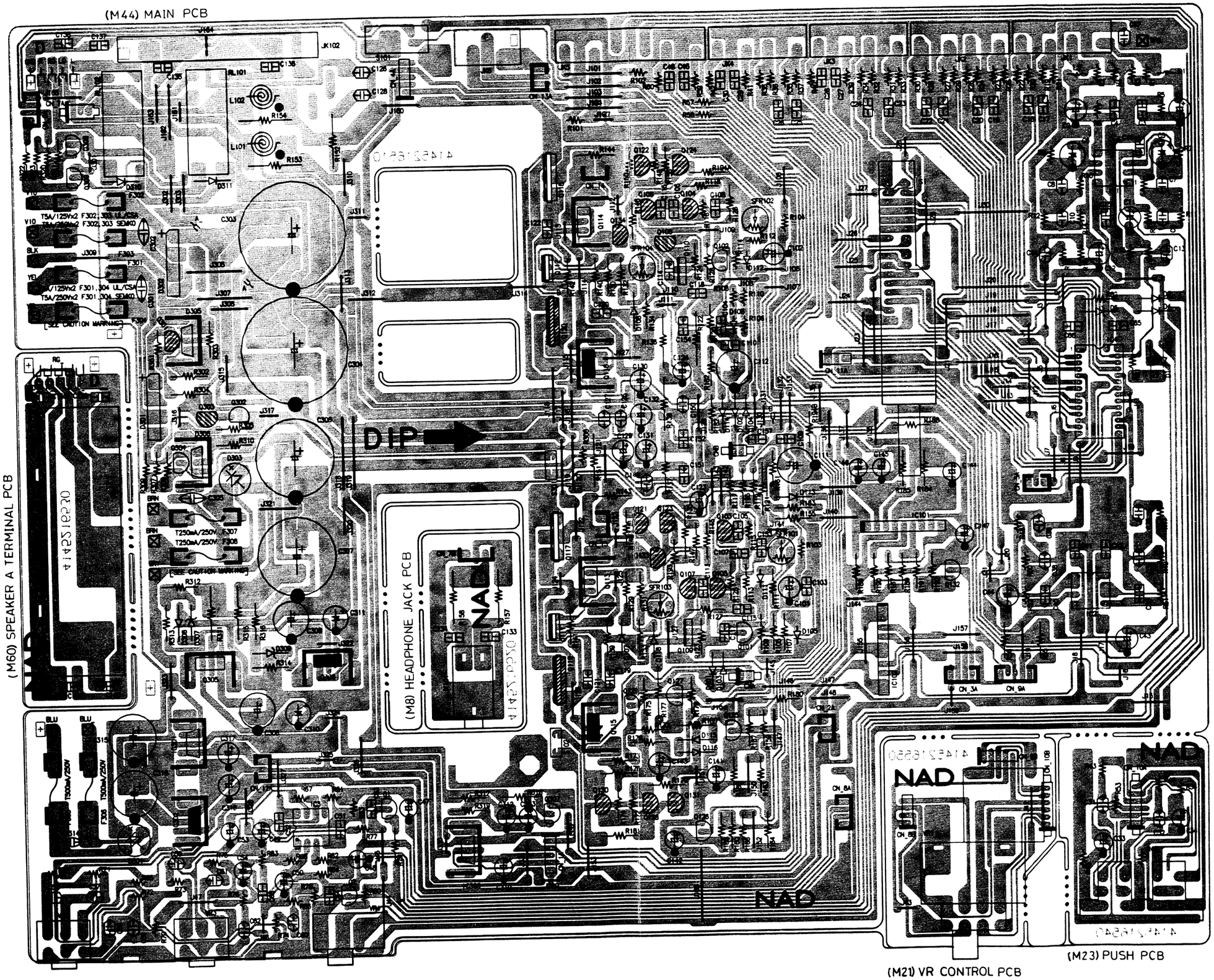
A. SET THE SIGNAL GENERATOR AND UNIT UNDER TEST TO 98MHZ FM MODE, 60 dBuV, LEFT ONLY MODULATION.
B. MONITOR THE OUT OF THE RIGHT CHANNEL TAPE 2. (FIG 8)
C. ADJUST SFR403 FOR MINIMUM SIGNAL.

Main Schematic Diagram

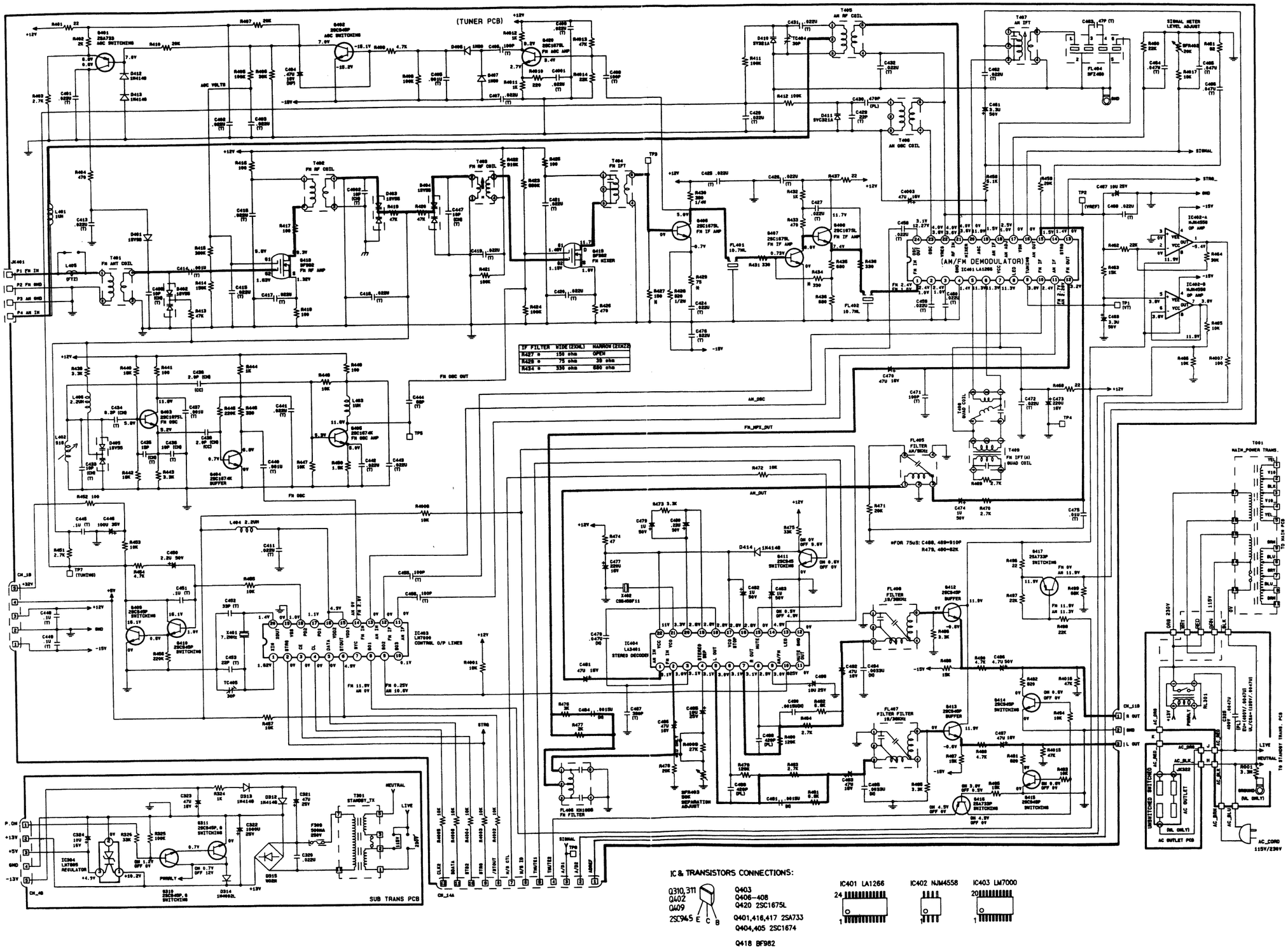


PCB LAYOUT

(M44) MAIN PCB

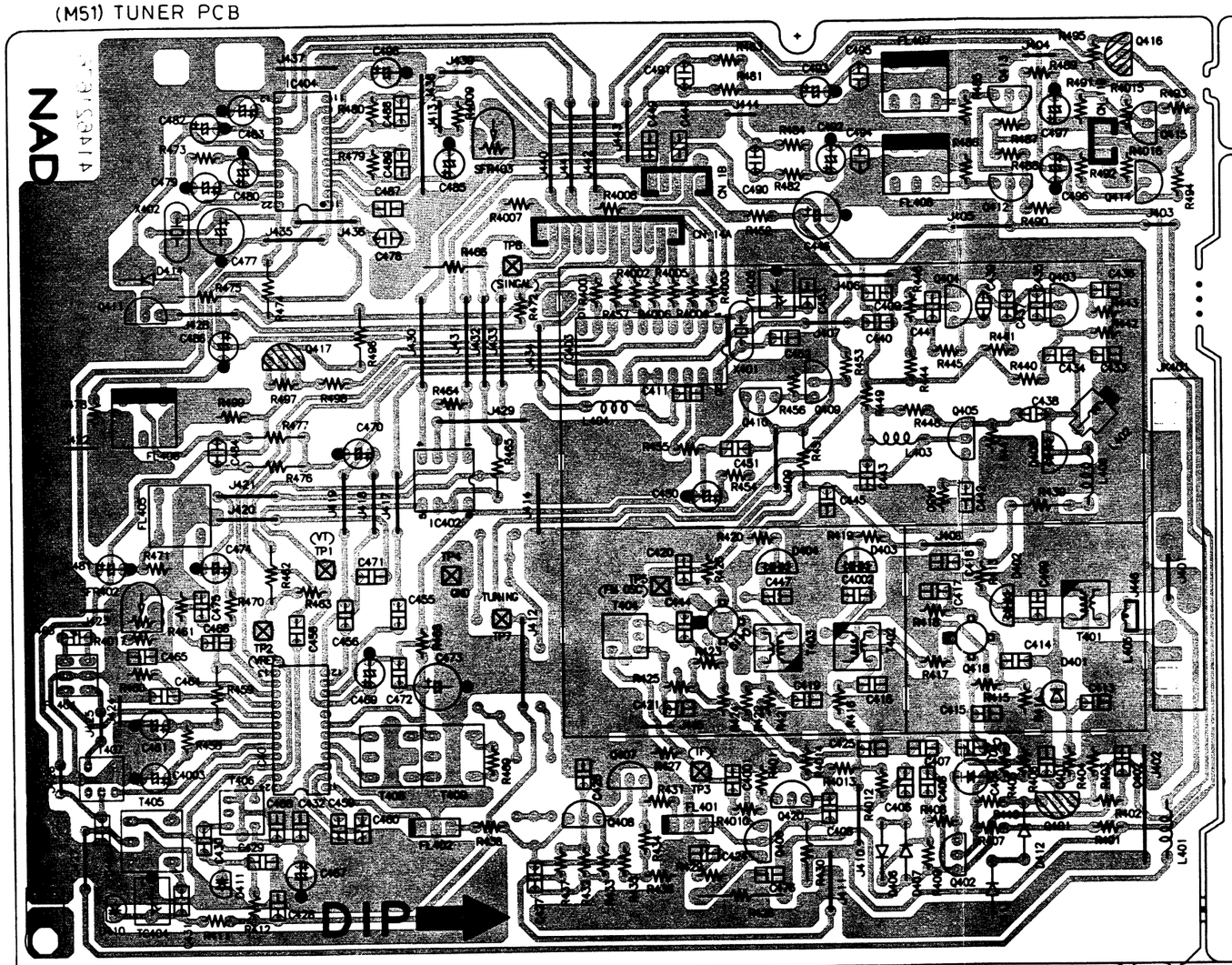


Tuner Schematic Diagram

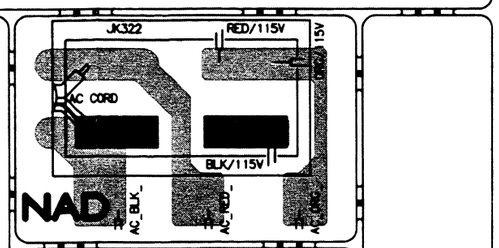


PCB LAYOUT

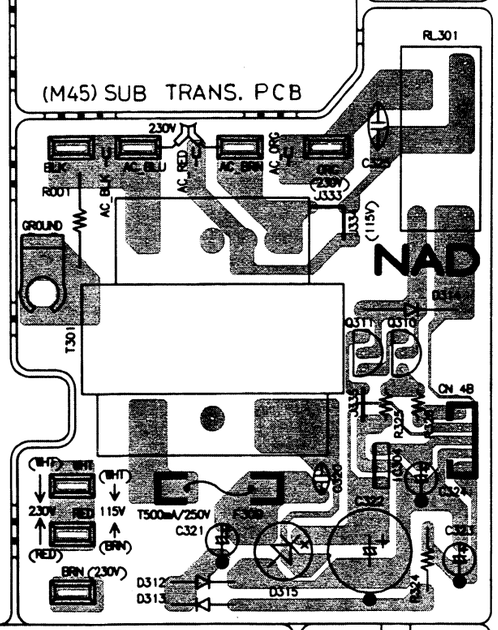
(M51) TUNER PCB



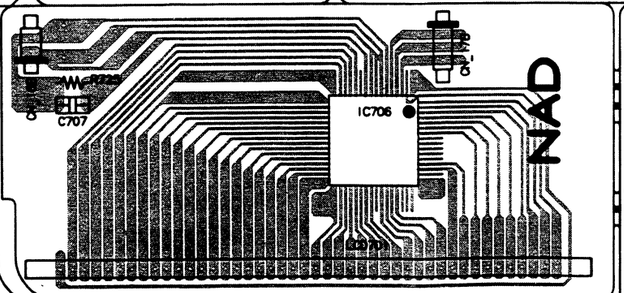
(M70) AC OUTLET PCB



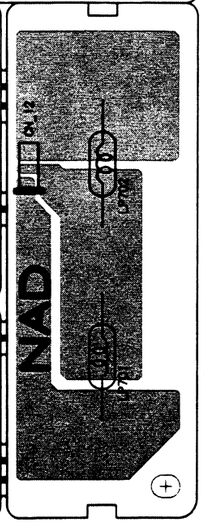
(M45) SUB TRANS. PCB

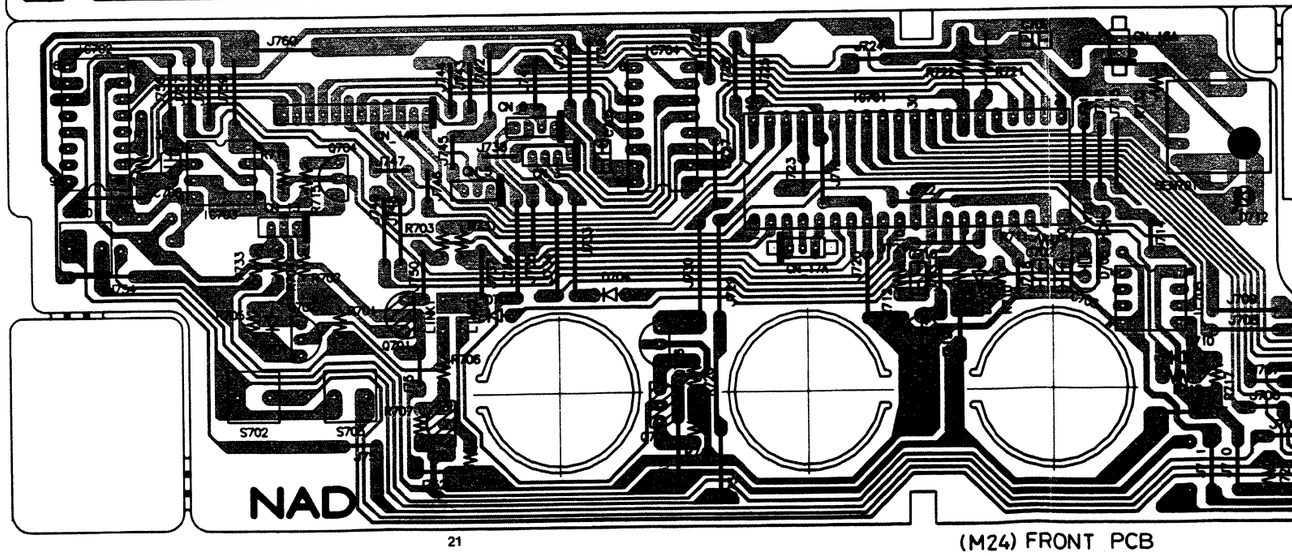


(M9a) DISPLAY PCB

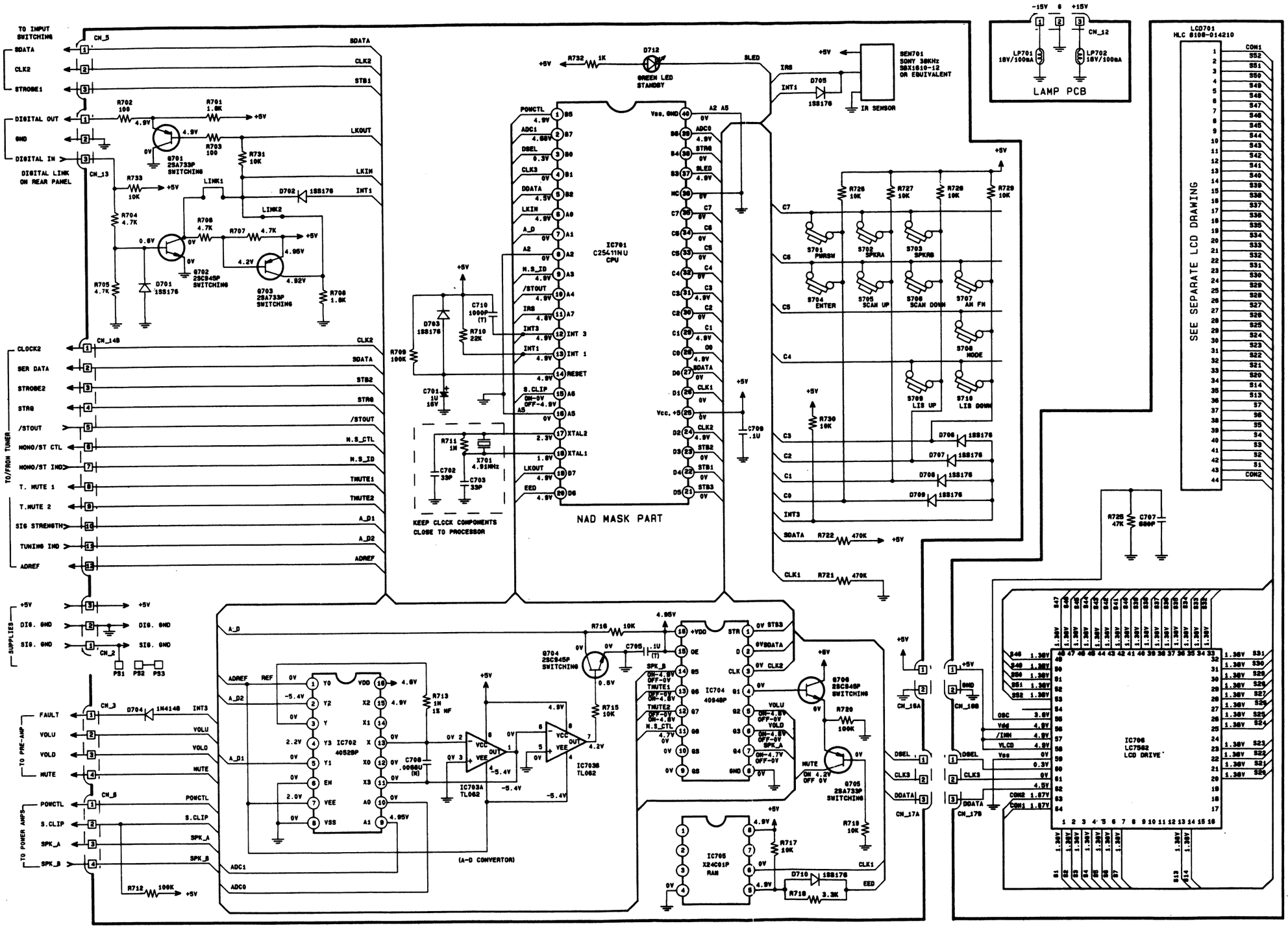


(M9C) LAMP PCB



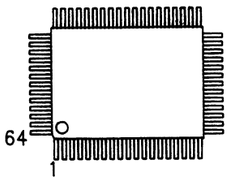


(M24) FRONT PCB

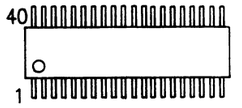


IC & TRANSISTORS CONNECTIONS:

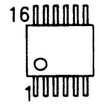
IC706 C25411NU

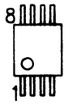


IC701 C25411NU

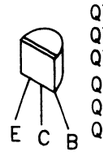


IC702 4052BP
IC704 4094BP



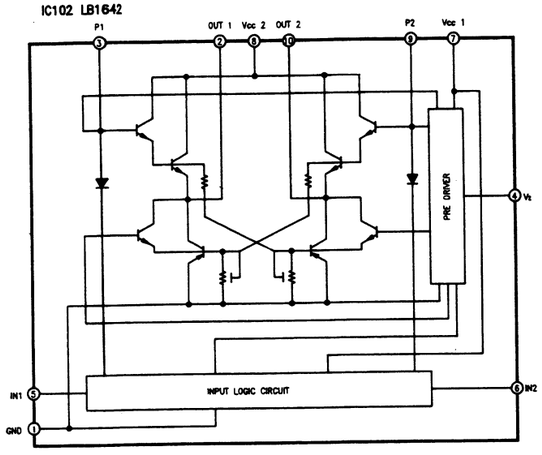


IC703A TL062
IC703B TL062
IC705 X24C01P

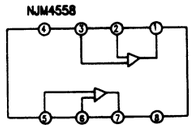


Q701, Q703, Q705 } 2SA733
Q702, Q704, Q706 } 2SC945P

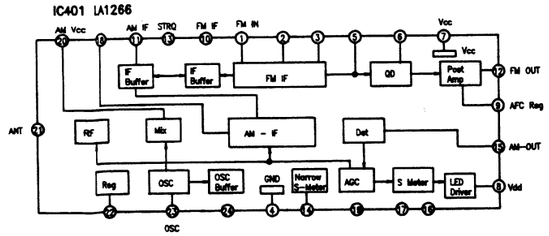
IC102 LB1642



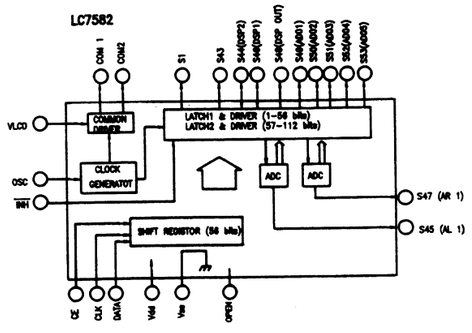
NJM4558



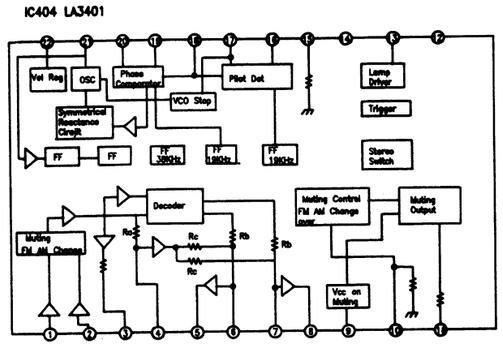
IC401 LA1266



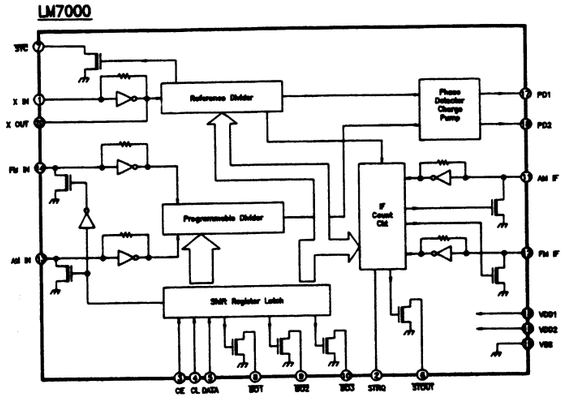
LC7582



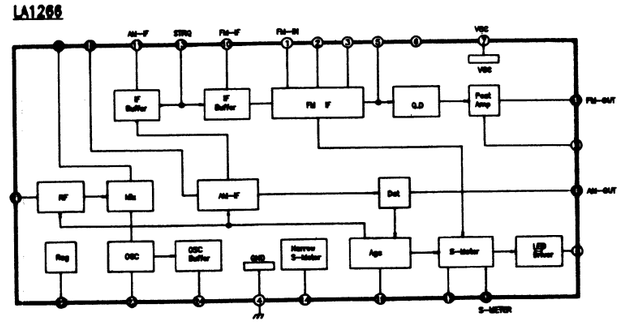
IC404 LA3401



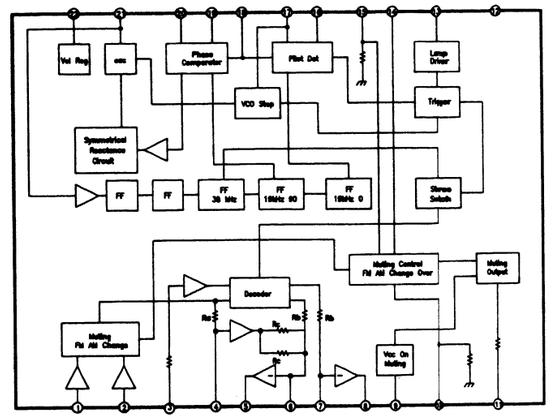
LM7000



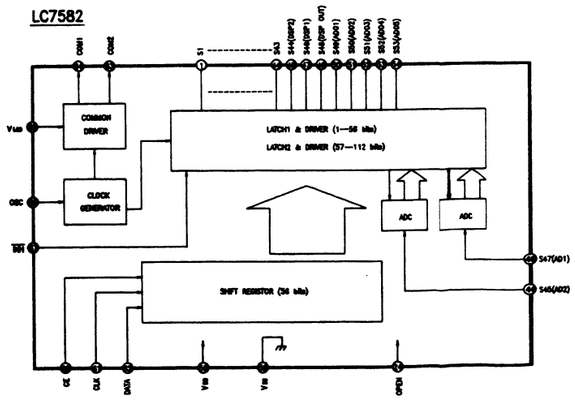
LA1266



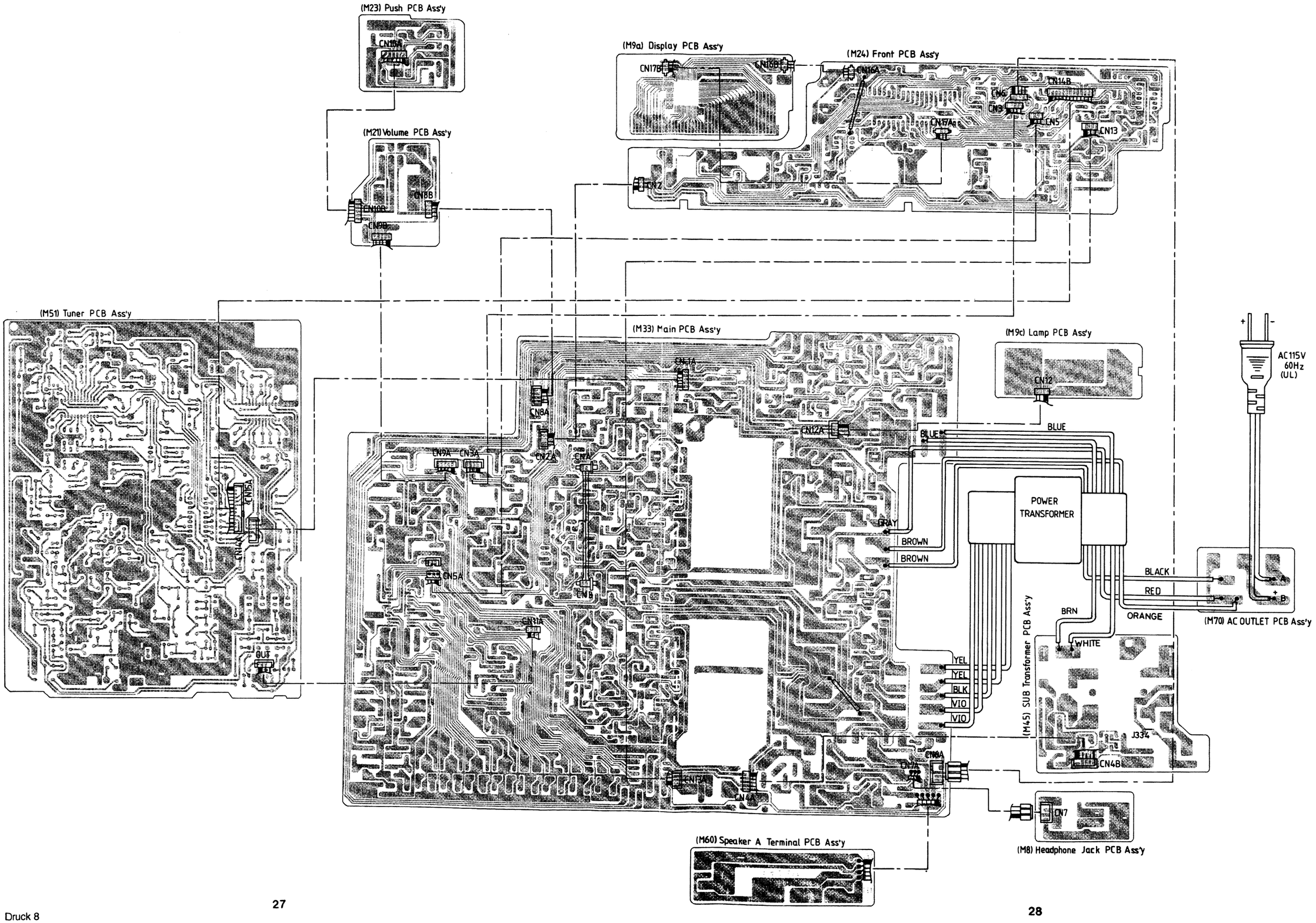
LA3401



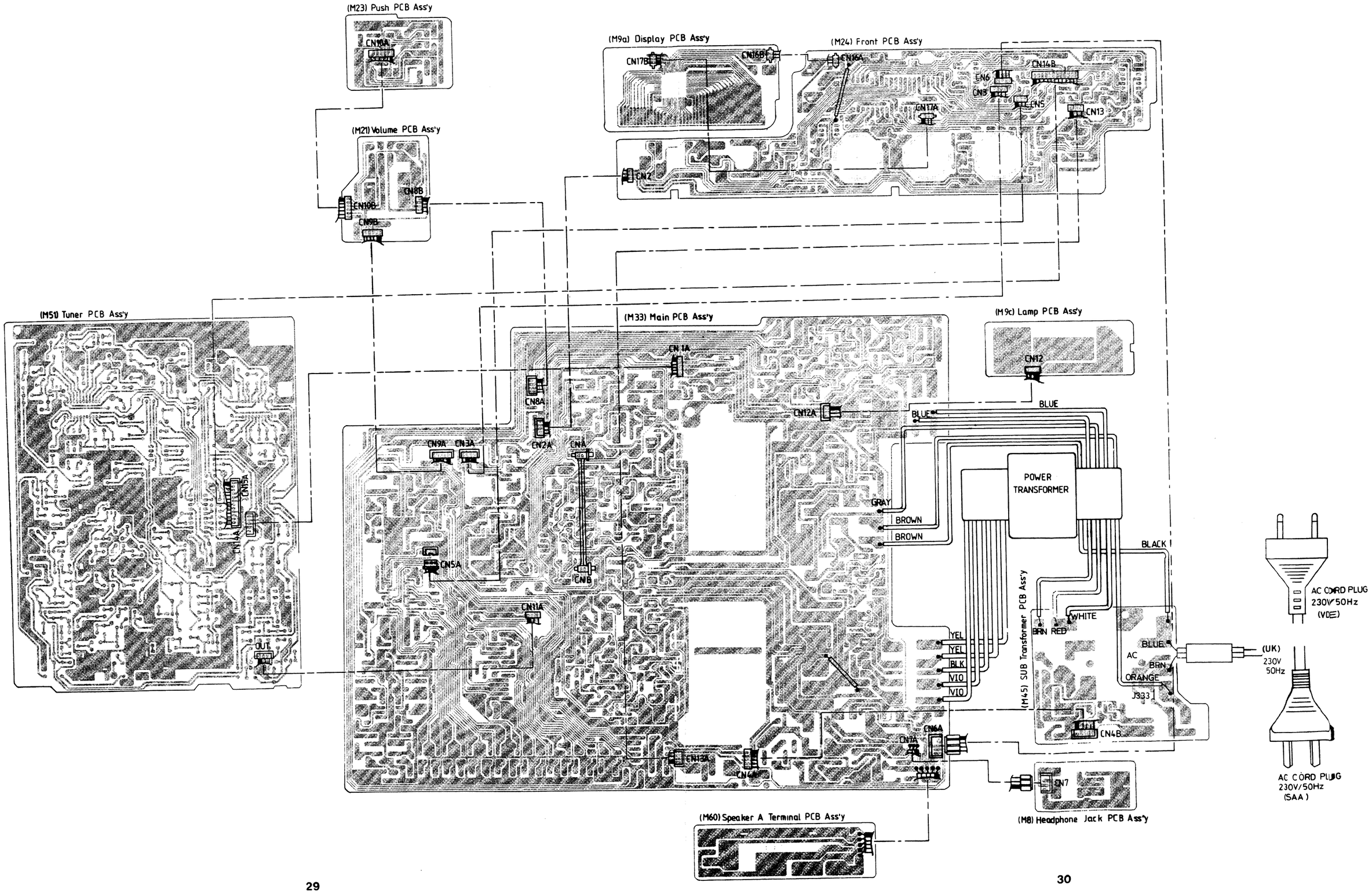
LC7582



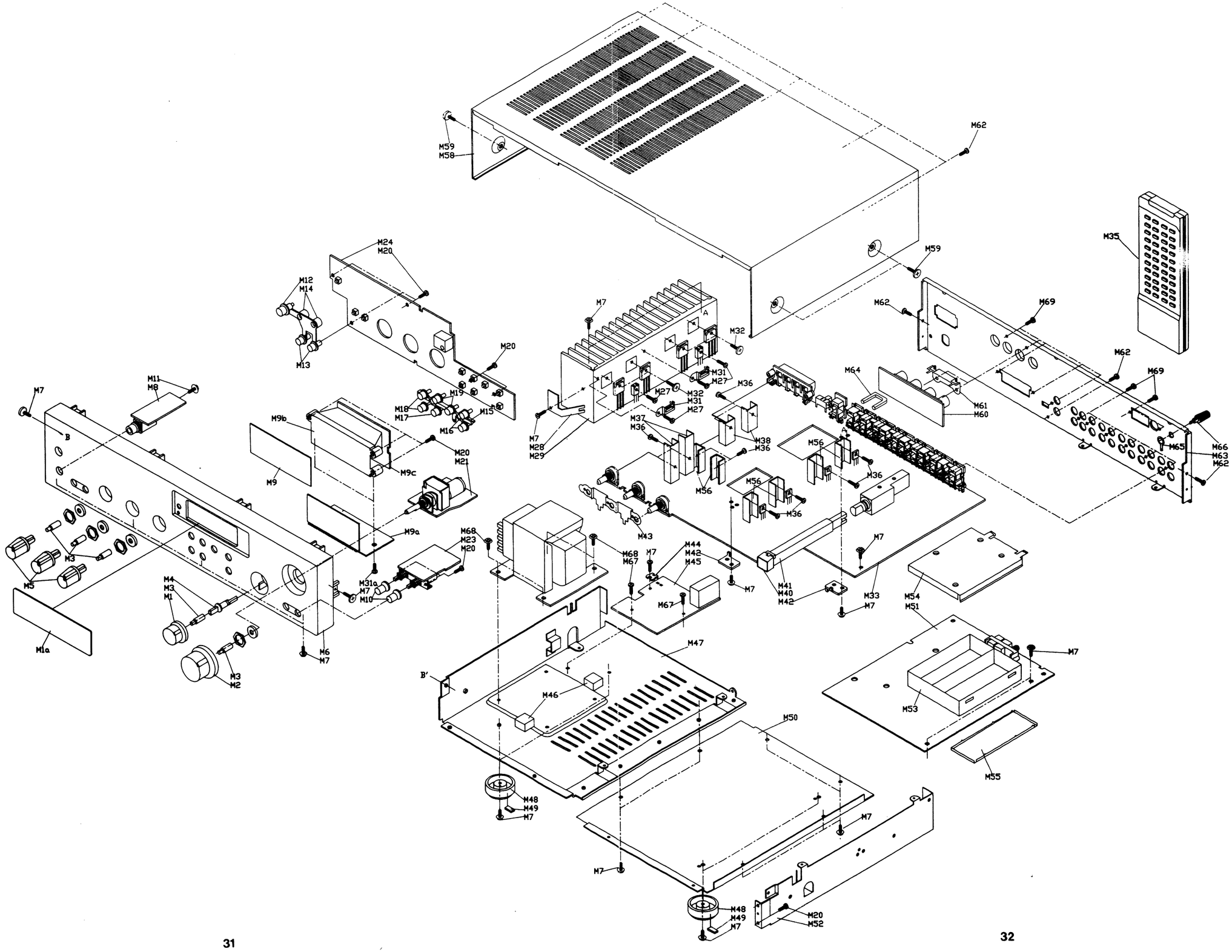
Wiring Diagram (A)-Component Side (For UL.VERSION)



Wiring Diagram (B)-Component Side (For UK, VDE, SAA, VERSION)



Mechanical Exploded View



EXPLODED VIEW PARTS

Ref. No.	Part No.	Description
M1a	0001079705	Display window assembly
M1	1006079705	Function knob
M2	1005079705	Volume knob
M3	1013079705	Series indicator (5 Pieces)
M4	2010079705	Function shaft
M5	1007079705	Balance/Bass/Treble knob (3 Pieces)
M6	1001079705	Front panel
M7	8961300800	9 (Taptite-B) CUP3008 ZN3A (25 Pieces)
M8	C145216520	Headphone jack PCB assembly
M9	1015079705	Display plate
M9a	C146216720	Display PCB assembly
M9b	2006079705	Display holder
M9c	C046216730	Lamp PCB assembly
M10	1012079705	Push button (B) (2 Pieces)
M11	8741301014	7 (Taptite-P) BID3010 WF14 ZN3A
M12	1008079705	Power button
M13	1017079705	Push button (C) (2 Pieces)
M14	2002079705	Power spring
M15	2001079705	Main spring
M16	1011079705	Push button (A) (2 Pieces)
M17	1010079705	Enter button
M18	1014079705	Scan button (2 Pieces)
M19	1009079705	Standard button (3 Pieces)
M20	8741301000	7 (Taptite-P) BID3010 ZN3A (12 Pieces)
M21	C145216550	Volume PCB assembly
M23	C145216540	Push PCB assembly
M24	C146216710	Front PCB assembly
M27	8941300800	9 (Taptite-B) BID3008 ZN3A (4 Pieces)
M28	2008079705	Tuning PCB bracket
M29	2013079705	Main heat sink
M31	2021079705	Ther switch holder (2 Pieces)
M31a	8741300800	7 (Taptite-P) BID3008 ZN3A (2 Pieces)
M32	8961301200	9 (Taptite-B) CUP3012 ZN3A (4 Pieces)
M33	C145216510	Main PCB assembly
M35	7159705001	Remote transmitter assembly
M36	8241300800	2 (Machine-ISO) BID3008 ZN3A (10 Pieces)
M37	2016040082	Heat sink LL (2 Pieces)
M38	2010011200	Heat sink (2 Pieces)
M40	2016079705	Bush
M41	2012079705	Shaft
M42	2020079705	PCB washer (2 Pieces)
M43	2015079705	Earth plate
M44	C145216510	Main PCB assembly
M45	C146216740	SUB transformer PCB assembly
M46	2007079336	PCB support (2 Pieces)
M47	2004079705	Bottom chassis L
M48	1016079705	Foot (4 Pieces)
M49	2022079705	Foot cushion (4 Pieces)
M50	2005079705	Bottom chassis R
M51	C146216740	Tuner PCB assembly
M52	2007079705	Side bracket
M53	2024079705	Shield case

Ref. No.	Part No.	Description
M54	2025079705	Shield cover
M55	2026079705	Shield plate
M56	2017079705	Heat sink A (6 Pieces)
M57	2000000908	Insulator SIL. TO-3P
M58	1003079705	Top cover
M59	8642400600	6 (Taptite-S) BID4006 ZN3K (4 Pieces)
M60	C145216530	Speaker A terminal PCB assembly
M61	2019079705	Speaker earth plate
M62	8942300800	9 (Taptite-B) BID3008 ZN3K (8 Pieces)
M63	1002079705	Rear panel
M64	2059068803	Short pin (2 Pieces)
M65	2047068801	Lug terminal 7.2Q
M66	0009068801	Gnd terminal assembly
M67	8641300800	6 (Taptite-S) BID3008 ZN3A (2 Pieces)
M68	8661400600	6 (Taptite-S) CUP4006 ZN3A (4 Pieces)
M69	8742301000	7 (Taptite-P) BID3010 ZN3K (13 Pieces)
M70	C046216750	AC outlet PCB

VERSIONS CHART:

VERSION	VOLTAGE	COUNTRY
UL,CSA	120V	North America
UK	240V	United Kingdom
AY	240V	Australia/New Zealand
EU	220V	Scandinavia

ELECTRICAL PARTS LIST

Main PCB Assembly

Symbol No.	Ref. No.	Part No.	Description
PC BOARD			
	4145216511	4145216511	PCB no components
	C145216511	C145216511	PCB assembly
ICS			
IC1	NE5532DD	41595532AN	IC,Phono Amp.
IC2	NJM2068DD	4159020684	IC,Buffer Amp
IC3	NJM2068DD	4159020684	IC,Pre Amp
IC4	TC9163N	415309163N	IC,Function Switch
IC101	TA7317P	415307317P	IC,Protection Circuit
IC102	LB1642B	415201642B	IC,Motor Drive
IC301	MC7815CT	4157078153	IC,Regulator
IC302	MC7915CT	4157079153	IC,Regulator
IC303	MC7812CT	4157078123	IC,Regulator
TRANSISTORS			
Q1,2	2SC2878A	410522878A	Mute switching
Q101,102	2SC2240BL	4105222402	R CH power Amp
Q103	2SA733P	410000733P	L CH power Amp
Q104	2SA733P	410000733P	R CH power Amp
Q105	2SA733P	410000733P	L CH power Amp
Q106	2SA733P	410000733P	R CH power Amp
Q107	2SA970BL	4105009702	L CH power Amp
Q108	2SA970BL	4105009702	R CH power Amp
Q109	2SC3789	4100237890	L CH power Amp
Q110	2SC3789	4100237890	R CH power Amp
Q111	2SC3789	4100237890	L CH power Amp
Q112	2SC3789	4100237890	R CH power Amp
Q113	2SD669A	410030669A	L CH power Amp
Q114	2SD669A	410030669A	R CH power Amp
Q115	2SB649A	410010649A	L CH power Amp
Q116	2SB649A	410010649A	R CH power Amp
Q117	2SC3519	4100023519	L CH power Amp
Q118	2SC3519	4100023519	R CH power Amp
Q119	2SA1386	4100013860	L CH power Amp
Q120	2SA1386	4100013860	R CH power Amp
Q121	2SA970BL	4105009702	Switching
Q122	2SA970BL	4105009702	Switching
Q123	2SA970BL	4105009702	Switching
Q124	2SA970BL	4105009702	Switching
Q125-127	2SC945P	410020945P	Soft clipin circuit control
Q128	2SA733P	410000733P	L CH power Amp
Q129	2SC945P	410020945P	Soft clipin circuit
Q130	2SA733P	410000733P	L CH power Amp
Q131	2SA733P	410000733P	L CH power Amp
Q132	2SC945P	410020945P	Soft clipin circuit
Q133,134	2SA970BL	4105009702	Switching
Q301	2SA970BL	4105009702	Switching
Q302,304	2SC2240BL	4105222402	R CH power Amp
Q303	2SA970BL	4105009702	Switching
Q305	2SD669A	410030669A	L CH power Amp
Q306	2SB649A	410010649A	R CH power Amp
Q307	2SC2240BL	4105222402	L CH power Amp
Q308,309	2SC945P	410020945P	Soft clipin circuit
DIODES			
D1-4	1N4148	4120141480	1N4148

Symbol No.	Ref. No.	Part No.	Description
D5	RD30EB2	4120523005	Zener,RD30EB2
D101-104	1N4148	4120141480	1N4148
D105-106	1SS176	4120901760	1SS176
D107,108	1N4148	4120141480	1N4148
D111,112	1SS176	4120901760	1SS176
D113-116	1N4148	4120141480	1N4148
D118	RD2.7EB2	4120520275	Zener,RD2.7EB2
D118	or RD2.7EB1	4120510275	Zener,RD2.7EB1
D301,302	GBU6D	41300GBU6D	GBU6D
D303,304	W02M	4130150022	W02M
D305,306	SF5D41	410405D410	SCR.SF5D41
D307	RD22EB2	4120522205	Zener,RD22EB2
D308	RD27EB2	4120522705	Zener,RD27EB2
D309	RD30EB2	4120523005	Zener,RD30EB2
D310,311	1N4148	4120141480	1N4148
D412-414	1N4148	4120141480	1N4148
COILS			
L1,2	3.7mH	7089705098	Ring coil
L101,102	1.8uH PC9901	4320189131	Audio coil
FUSES			
F305,306	T500mA/250V	5266050060	Fuse UL/CSA (UL,CSA)
F305,306	T500mA/250V	5267050060	Fuse semk (UK)
F307,308	T250mA/250V	5266025060	Fuse UL/CSA (UL,CSA)
F307,308	T250mA/250V	5267025060	Fuse semk (UK)
F309	T500mA/250V	5266050060	Fuse UL/CSA (UL,CSA)
F309	T500mA/250V	5267050060	Fuse semk T500mA/250 (UK)
CAPACITORS			
C1,2	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
C3,4	7306522115	7306522115	Mult. CAP 220uF/50V,+-10%
C5,6	5154221210	5154221210	EL. CAP 220uF/10V,+-20%
C7,8	5091243513	5091243513	PL. CAP .024uF,+-5%
C9,10	5091682513	5091682513	PL. CAP .0068uF,+-5%
C11,12	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
C13,14	5091152513	5091152513	PL. CAP .0015uF,+-5%
C15,16	7307110315	7307110315	Mult. CAP .01uF/16V,+-10%
C17-30	7306510115	7306510115	Mult. CAP 100uF/50V,+-10%
C35-38	5114104550	5114104550	Mylar. CAP .1uF,+-5%
C39,40	7306510115	7306510115	Mult. CAP 100uF/50V, +-10%
C41,42	7307110315	7307110315	Mult. CAP .01uF/50V,+-10%
C43,44	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
C45,46	7306522115	7306522115	Mult. CAP 220uF/50V,+-10%
C47,48	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
C49,50	5154470216	5154470216	EL. CAP 47uF/16V,+-20%
C51,52	7307110315	7307110315	Mult. CAP .01uF/16V,+-10%
C53,54	5154101210	5154101210	EL. CAP 100uF/10V,+-20%
C55,56	5114183550	5114183550	Mylar. CAP .018uF/50V,+-5%
C57,58	5113474563	5113474563	EL. CAP .47uF/63V,+-5%
C59,60	5114183550	5114183550	Mylar. CAP .018uF/50V,+-5%
C61,62	5114104550	5114104550	Mylar. CAP .1uF/50V,+-5%
C63,64	7306568115	7306568115	Mult. CAP 680uF/50V,+-10%
C65,66	7307110315	7307110315	Mult. CAP .01uF/16V,+-10%
C67	5114104550	5114104550	Mylar. CAP .1uF/50V,+-5%

Symbol No.	Ref. No.	Part No.	Description
C68	7306933052	7306933052	Mult. CAP 33uF/50V,+-20%
C101,102	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
C103,104	7306556115	7306556115	Mult. CAP 560uF/50V,+-10%
C105,106	7306947052	7306947052	Mult. CAP 47uF/50V,+-5%
C107,108	7306510215	7306510215	Mult. CAP .001uF/50V,+-5%
C109,110	7306610445	7306610445	Mult. CAP .1uF/50V,+-5%
C111,112	5154102210	5154102210	EL. CAP 1000uF/10V,+-20%
C113,114	7306922052	7306922052	Mult. CAP 22uF/50V,+-5%
C115,116	7306922052	7306922052	Mult. CAP 22uF/50V,+-5%
C117,118	7306522115	7306522115	Mult. CAP 220uF/50V,+-10%
C123,124	5154470225	5154470225	EL. CAP 47uF/25V,+-20%
C125-128	5114104550	5114104550	Mylar. CAP .1uF,+-5%
C129-132	5154100263	5154100263	EL. CAP 10uF/63V,+-20%
C135,136	7307110315	7307110315	Mult. CAP .01uF/16V,+-10%
C137,138	7307822215	7307822215	Mult. CAP .0022uF/16V,+-10%
C141,142	5154101210	5154101210	EL. CAP 100uF/10V,+-20%
C143	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
C144,145	5154470216	5154470216	EL. CAP 47uF/16V,+-20%
C146	5154229250	5154229250	EL. CAP 2.2uF/50V,+-20%
C147	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
C149,150	5114104511	5114104511	Mylar CAP .1uF/100V,+-5%
C153,154	7306922052	7306922052	Mult. CAP 22uF/50V,+-5%
C301,302	5104103441	5104103441	CER. CAP .01uF/500V,+-20%
C303,304	5154103250	5154103250	EL. CAP 10000uF/50V,+-20%
C305	5104103441	5104103441	CER. CAP .01uF/500V,+-20%
C306,307	5154102210	5154102210	EL. CAP 680uF/80V,+-20%
C308,309	5154470210	5154470210	EL. CAP 47uF/100V,+-20%
C310,311	5154470263	5154470263	EL. CAP 47uF/63V, +-20%
C312,313	5154100250	5154100250	EL. CAP 10uF/50V,+-20%
C314	5104103452	5104103452	CER. CAP .01uF,+80/-20%
C315,316	5154102235	5154102235	EL. CAP 1000uF/35V,+-20%
C317-319	5154100225	5154100225	EL. CAP 10uF/25V,+-20%
RESISTORS			
R1,2	4050122252	4050122252	RES. 2.2K ohm, 1/6W
R3,4	4050133452	4050133452	RES. 330K ohm, 1/6W
R5,6	4050156352	4050156352	RES. 56K ohm,1/6W
R7,8	4050118162	4050118162	RES. 180 ohm, 1/6W
R9,10	4050113462	4050113462	RES. 130K ohm, 1/6W
R11,12	4050111362	4050111362	RES. 11K ohm, 1/6W
R13,14	4050182052	4050182052	RES. 82 ohm, 1/6W
R15,16	4050122352	4050122352	RES. 22K ohm,1/6W
R17,18	4050110252	4050110252	RES. 1K ohm, 1/6W
R19,20	4050110452	4050110452	RES. 100K ohm,1/6W
R21,22	4050110252	4050110252	RES. 1K ohm, 1/6W
R23,24	4050110452	4050110452	RES. 100K ohm, 1/6W
R25,26	4050110252	4050110252	RES. 1K ohm, 1/6W
R27,28	4050110452	4050110452	RES. 100K ohm, 1/6W
R29,30	4050110252	4050110252	RES. 1K ohm, 1/6W
R31,32	4050110452	4050110452	RES. 100K ohm, 1/6W
R33,34	4050110252	4050110252	RES. 1K ohm, 1/6W
R35,36	4050110452	4050110452	RES. 100K ohm,1/6W
R37,38	4050110252	4050110252	RES. 1K ohm, 1/6W
R39-42	4050122252	4050122252	RES. 2.2K ohm, 1/6W
R47,48	4050110452	4050110452	RES. 100K ohm, 1/6W
R49,50	4050122452	4050122452	RES. 220K ohm, 1/6W
R51,52	4050147152	4050147152	RES. 470 ohm, 1/6W

Symbol No.	Ref. No.	Part No.	Description
R55,56	4050410252	4050410252	RES. 1K ohm,1/4W
R58-60	4050110252	4050110252	RES. 1K ohm, 1/6W
R61,62	4050110152	4050110152	RES. 100 ohm, 1/6W
R63,64	4050110452	4050110452	RES. 100K ohm,1/6W
R65,66	4050122252	4050122252	RES. 2.2K ohm, 1/6W
R67,68	4050115352	4050115352	RES. 15K ohm, 1/6W
R69,70	4050139262	4050139262	RES. 3.9K ohm, 1/6W
R71,72	4050168162	4050168162	RES. 680 ohm, 1/6W
R73,74	4050110252	4050110252	RES. 1K ohm,1/6W
R75,76	4050118152	4050118152	RES. 180 ohm, 1/6W
R77,78	4050122152	4050122152	RES. 220 ohm, 1/6W
R79	4050427252	4050427252	RES. 2.7K ohm, 1/4W
R80	4050122252	4050122252	RES. 2.2K ohm, 1/6W
R81,82	4050410252	4050410252	RES. 1K ohm,1/4W
R83	4050133252	4050133252	RES. 13K ohm, 1/6W
R101,102	4050122452	4050122452	RES. 220K ohm, 1/6W
R103,104	4050122252	4050122252	RES. 2.2K ohm, 1/6W
R105,109	4050422352	4050422352	RES. 22K ohm, 1/4W
R106	4050122352	4050122352	RES. 22K ohm,1/6W
R107	4050439152	4050439152	RES. 390 ohm,1/4W
R108	4050139152	4050139152	RES. 390 ohm, 1/6W
R110	4050122352	4050122352	RES. 22K ohm, 1/6W
R112	4050115152	4050115152	RES. 150 ohm, 1/6W
R113	4050422352	4050422352	RES. 22K ohm, 1/4W
R114	4050122352	4050122352	RES. 22K ohm, 1/6W
R115,116	4050139152	4050139152	RES. 390 ohm, 1/6W
R117,118	4050439152	4050439152	RES. 390 ohm, 1/4W
R119,120	4070422074	4070422074	RN .2 ohm, 1/4W
R121,122	4271039155	4271039155	RES. 390 ohm,1W
R123,124	4050439152	4050439152	RES. 390 ohm,1/4W
R125-128	4050433052	4050433052	RES. 33 ohm,1/4W
R129,130	4050422152	4050422152	RES. 220 ohm,1/4W,+-5%
R131,132	4050410152	4050410152	RES. 100 ohm, 1/4W
R133,134	4050439052	4050439052	RES. 39 ohm,1/4W
R135-138	4050212252	4050212252	RES. 1.2k ohm, 1/2W
R139,140	4050433052	4050433052	RES. 33 ohm, 1/4W
R141,142	4170418155	4170418155	RES. 180 ohm, 1/4W
R143,144	7192022855	7192022855	RES. MPC70 .22 ohm
R145,146	4050447352	4050447352	RES. 47K ohm, 1/4W
R147,148	4070462174	4070462174	RN. 620 ohm, 1/4W
R149,150	4050422352	4050422352	RES. 22K ohm, 1/4W
R151,152	4271010055	4271010055	RES. 10 ohm, 1W
R153,154	4050233952	4050233952	RES. .33 ohm, 1/2W
R155,156	4050447352	4050447352	RES. 47K ohm, 1/4W
R159,160	4070410274	4070410274	RN. 1K ohm,1/4W
R161,162	4070413374	4070413374	RN. 13K ohm,1/4W
R163,164	4070410274	4070410274	RN. 1K ohm, 1/4W
R165-168	4050447352	4050447352	RES. 47K ohm, 1/4W
R169,170	4050410352	4050410352	RES. 10K ohm,1//4W
R171,172	4050447252	4050447252	RES. 4.7K ohm,1/4W
R173,174	4050418252	4050418252	RES. 1.8K ohm,1/4W
R175,176	4050439152	4050439152	RES. 390 ohm, 1/4W
R177	4050210352	4050210352	RES. 10K ohm, 1/2W
R178	4050420352	4050420352	RES. 20K ohm,1/4W
R179	4050447252	4050447252	RES. 4.7K ohm, 1/4W
R180	4050439352	4050439352	RES. 39K ohm, 1/4W
R181	4050447352	4050447352	RES. 47K ohm,1/4W

Symbol No.	Ref. No.	Part No.	Description
R182-185	4050456352	4050456352	RES. 56K ohm,1/4W
R186	4050422352	4050422352	RES. 22K ohm, 1/4W
R187	4050456252	4050456252	RES. 5.6K ohm,1/4W
R188	4050422452	4050422452	RES. 220K ohm, 1/4W
R189	4050415352	4050415352	RES. 15K ohm, 1/4W
R190	4050439252	4050439252	RES. 3.9K ohm, 1/4W
R191	4050427352	4050427352	RES. 27K ohm, 1/4W
R192,193	4050468252	4050468252	RES. 6.8K ohm, 1/4W
R194A	4050422252	4050422252	RES. 2.2K ohm,1/4W
R194B	4050447252	4050447252	RES. 4.7K ohm, 1/4W
R301,303	4050410252	4050410252	RES. 1K ohm, 1/4W
R304	4050422352	4050422352	RES. 22K ohm, 1/4W
R305	4050447252	4050447252	RES. 4.7K ohm, 1/4W
R306	4050122352	4050122352	RES. 22K ohm, 1/6W
R307	4050422352	4050422352	RES. 22K ohm, 1/4W
R308	4050410352	4050410352	RES. 10K ohm, 1/4W
R309	4050410252	4050410252	RES. 1K ohm,1/4W
R311	4271022055	4271022055	RES. 22 ohm,1W
R312	4050415252	4050415252	RES. 1.5K ohm,1/4W
R313,314	4050433152	4050433152	RES. 330 ohm,1/4W
R315	4272068155	4272068155	RES. 680 ohm,2W
R316,317	4050468252	4050468252	RES. 6.8K ohm,1/4W
R318	4170410255	4170410255	RES. 1K ohm,1/4W
R319	4050412352	4050412352	RES. 12K ohm,1/4W
R320,322	4050482252	4050482252	RES. 8.2K ohm,1/4W
R321,323	4050415352	4050415352	RES. 15K ohm,1/4W
VARIABLE RES.			
VR2	RK163121A144	5020254102	VAR. RES 50kCx2, Bass
VR3	RK163121A161	5020214188	VAR. RES 10kCx2, Treble
VR4	RK163111E293	5020114187	VAR. 10kW, Balance
SFR101,102	VZ068TLT	5226501T56	SFR 0.5Kx,Line
SFR101,102	or 5226501177	5226501177	SFR 0.5Kx,Line
SFR103,104	VZ068TLT	5226101T56	SFR .1Kx,Line
SFR103,104	or 5226101177	5226101177	SFR .1Kx,Line
SWITCHES			
S1	SRRZV46N21	442046152B	Record Switch
S101	SN-22T	4410202127	Slide Switch SN-22T
S102	UP62110PM5	4400000178	Ther Switch
S301	UP6290PM5	4400000176	Ther Switch
JACKS			
JK1	RJ1018-010GD1	4500800364	RCA jack 4 Pin
JK2-4	4P RCA jack	4500800250	RCA jack 4 Pin
JK5	CPS-046	4500800331	RCA jack 6 Pin
JK6	RJ-1020-050	4500800277	2P RCA jack
JK101	JY-6318-01-030	4500500272	Headphone jack
JK102	HSP-304V-01	4560004079	SPK TER. 4 pin
JK322	HJC-031-01	4570101340	AC outlet (UL,CSA only)
JK401	2P terminal	4560002087	FM antenna
MISCELLANEOUS			
CNA,B	4490200261	4490200261	Wire holder 2P20
CN2A,5A,12A,13A	4490301004	4490301004	Male connector PH 3P
RL101,102	VB-24MBU	4390000020	Relay ,VB-24MBU

Symbol No.	Ref. No.	Part No.	Description
CN3A,6A	4490401004	4490401004	Male connector PH 4P
CN7A	4490300261	4490300261	Wire holder 3P20
CN8A	4490401004	4490401004	Male connector PH 4P
CN9A	4490501004	4490501004	Male connector PH 5P
CN14,15	4490201002	4490201002	Male connector EH 2P
	FRONT PCB ASSEMBLY		
PC BOARD			
	4146216710	4146216710	PCB no components
	C146216710	C146216710	PCB assembly
ICS			
IC701	C25411NU	4155C25411	CPU
IC702	HEF4052BP	415D040522	A-D convertor
IC703	NJM062D	415900062D	A-D convertor
IC704	HEF4094BP	415D040942	Mute IC
IC705	X24C01P	415X24C01P	RAM IC
TRANSISTORS			
Q701	2SA733P	410000733P	Switching
Q702	2SC945P	410020945P	Switching
Q703	2SA733P	410000733P	Switching
Q704	2SC945P	410020945P	Switching
Q705	2SA733P	410000733P	Switching
Q706	2SC945P	410020945P	Switching
DIODES			
D701-710	1SS176	4120901760	1SS176
D712	LTL-4231	4120642315	LED GRN
CAPACITORS			
C701	5154109250	5154109250	EL. CAP. .1uF/50V,+80/-20%
C702,703	7306933052	7306933052	Mult. CAP. 33uF/50V,+-5%
C705	7306610445	7306610445	Mult. CAP. .1uF/50V,+80/-20%
C708	5114682550	5114682550	Mylar. CAP. .0068uF/50V,+-5%
C709	7306610445	7306610445	Mult. CAP. .1uF/50V,+80/-20%
C710	7306510215	7306510215	Mult. CAP. .001uF/50V,+-10%
RESISTORS			
R701	4050118252	4050118252	RES. 1.8K ohm,1/6W
R702,703	4050110152	4050110152	RES. 100 ohm,1/6W
R704-707	4050147252	4050147252	RES. 4.7K ohm,1/6W
R708	4050118252	4050118252	RES. 1.8K ohm,1/6W
R709	4050110452	4050110452	RES. 100K ohm,1/6W
R710	4050122352	4050122352	RES. 22K ohm,1/6W

Symbol No.	Ref. No.	Part No.	Description
R711	4050110552	4050110552	RES. 1M ohm,1/6W
R712	4050110452	4050110452	RES. 100K ohm,1/6W
R713	4070110574	4070110574	RES. 1M ohm,1/6W
R715-717	4050110352	4050110352	RES. 10K ohm,1/6W
R718	4050133252	4050133252	RES. 3.3K ohm,1/6W
R719	4050110352	4050110352	RES. 10K ohm,1/6W
R720	4050110452	4050110452	RES. 100K ohm,1/6W
R721,722	4050447452	4050447452	RES. 470K ohm,1/4W
R726	4050110552	4050110552	RES. 1M ohm,1/6W
R727,729	4050110352	4050110352	RES. 10K ohm,1/6W
R730	4050110552	4050110552	RES. 1M ohm,1/6W
R731	4050110352	4050110352	RES. 10K ohm,1/6W
R732	4050110252	4050110252	RES. 1K ohm,1/6W
R733	4050110352	4050110352	RES. 10K ohm,1/6W
SWITCHES			
S701-710	SKHVBE3520-CP	4400000156	Tack switch
MISCELLANEOUS			
CN-16A	**4490200261**	**4490200261**	Wire holder 2P20
CN-17A	4490300261	4490300261	Wire holder 3P20
SEN701	LTM-9052A4	71409052A4	Remote receiver
X701	CSA 4.91MG	416090491M	Resonator
Lamp PCB assembly			
PC BOARD			
	4046216730	4046216730	PCB no components
	C046216730	C046216730	PCB assembly
LAMPS			
LP701,702	18V/100mA	4700300005	Fuse lamp
Tuner PCB assembly			
PC BOARD			
	4146216760	4146216760	PCB no components
	C146216760	C146216760	PCB assembly
ICS			
IC401	LA1266	4152012660	AM/FM demodulator
IC402	NJM4558DD	4159045584	O/P Amp
IC403	LM7000	4152070000	Control O/P lines
IC404	LA3401	4152034010	Stereo decoder
TRANSISTORS			
Q401	2SA733P,Q	410000733P,Q	AGC switching
Q402	2SC945P,Q	410020945P,Q	AGC switching
Q403	2SC1675L	410021675L	FM Oscillator
Q404	2SC1674K	410021674K	Buffer
Q405	2SC1674K	410021674K	FM Oscillator Amp
Q406-408	2SC1675L	410020675L	FM IF AMP
Q409-411	2SC945P,Q	410020945P,Q	Switching
Q412,413	2SC945P,Q	410020945P,Q	Buffer
Q414,415	Switching	410000733P,Q	2SA733P,Q
Q416,417	2SA733P,Q	410000733P,Q	2SA733P,Q
Q418	FET BF982	4104309820	FM RF Amp
Q419	FET BF982	4104309820	FM mixer
Q420	2SC1675L	410020675L	2SC1675L

Symbol No.	Ref. No.	Part No.	Description
CAPACITORS			
C401	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C402	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C403	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C404	5165478250	5165478250	EL. CAP. .47uF/50V,+-20%
C405	7306510215	7306510215	Mult. CAP. .001uF/50V,+-10%
C406	7306510115	7306510115	Mult. CAP. 100pF/50V,+-10%
C407	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C408	7306510115	7306510115	Mult. CAP. 100pF/50V,+-10%
C409	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C411	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C413	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C414	7306510215	7306510215	Mult. CAP. .001uF/50V,+-10%z
C415	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C416-421	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C424-428	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C429	7306922055	7306922055	Mult. CAP. 22pF/50V,+-5%
C430	5091471513	5091471513	PL. CAP. 470pF,+-5%
C431	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C432	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C433	7306010055	7306010055	Mult.CAP. 10pF/50V,+-5%
C434	7306082915	7306082915	Mult. CAP. 8.2uF/50V,+-10%
C435	7306015055	7306015055	Mult. CAP. 15pF/50V,+-5%
C436	7306010055	7306010055	Mult.CAP. 10pF/50V,+-5%
C437	7306510215	7306510215	Mult. CAP. .001uF/50V,+-10%
C438,439	5121209752	5121209752	Cer CAP. 2P,CH,+-0.25P
C440	7306510215	7306510215	Mult. CAP. .001uF/50V,+-10%
C441-443	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C444	7306968055	7306968055	Mult. CAP. 68pF/50V,+-5%
C445	7306610445	7306610445	Mult. CAP. .1uF/50V,+80/-20%
C446	5154101235	5154101235	EL. CAP. 100uF/35V,+-20%
C447	5121100852	5121100852	Cer CAP. 10pF,CH,+-0.5P
C448	7306610445	7306610445	Mult. CAP. .1uF/50V,+80/-20%
C449	7306610445	7306610445	Mult. CAP. .1uF/50V,+80/-20%
C450	5154229250	5154229250	EL. CAP. 2.2uF/50V,+-20%
C451	7306610445	7306610445	Mult. CAP. .1uF/50V,+80/-20%
C452	7306933052	7306933052	Mult. CAP. 33pF/50V,+-5%
C453	7306922055	7306922055	Mult. CAP. 22pF/50V,+-5%
C455	7306510115	7306510115	Mult. CAP. 100pF/50V,+-10%
C456	7306510115	7306510115	Mult. CAP. 100pF/50V,+-10%
C458-460	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C461	5154339250	5154339250	EL. CAP. 3.3uF/50V,+-20%
C462	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C463	7306947055	7306947055	Mult. CAP. 47pF,+-5%
C464	7306647345	7306647345	Mult. CAP. .047uF/50V,+80/-20%
C465,466	7306647345	7306647345	Mult. CAP. .047uF/50V,+80/-20%
C467	5154100225	5154100225	EL. CAP. 10uF/25V,+-20%
C468	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C470	5154470216	5154470216	EL. CAP. 47uF/16V,+-20%
C471	7306510115	7306510115	Mult. CAP. 100pF/50V,+-10%
C472	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C473	5154221216	5154221216	EL. CAP. 220uF/16V,+-20%
C474	5154109250	5154109250	EL. CAP. 1uF/50V,+-20%
C475	7307110315	7307110315	Mult. CAP. .01uF/50V,+-10%
C476	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%

Symbol No.	Ref. No.	Part No.	Description
C477	5154221216	5154221216	EL. CAP. 220uF/16V,+-20%
C478	5116473550	5116473550	EL. CAP. .047uF/50V,+-5%
C479	5154109250	5154109250	EL. CAP. 1uF/50V,+-20%
C480	5154228250	5154228250	EL. CAP. .22uF/50V,+-20%
C481	5154470216	5154470216	EL. CAP. 47uF/16V,+-20%
C482,483	5154109250	5154109250	EL. CAP. 1uF/50V,+-20%
C484	5114152550	5114152550	Mylar. CAP. .0015uF/50V,+-5%
C485	5154100225	5154100225	EL. CAP. 10uF/25V,+-20%
C486	5154470216	5154470216	EL. CAP. 47uF/16V,+-20%
C487	7306539115	7306539115	Mult. CAP. 390pF/50V,+-10%
C488,489	5091911513	5091911513	PL. CAP. 910pF,+-5%
C490,491	5114152550	5114152550	Mylar. CAP. .0015uF/50V,+-5%
C492,493	5154470216	5154470216	EL. CAP. 47uF/16V,+-20%
C494,495	5114332550	5114332550	Mylar CAP. .0033uF/50V,+-5%
C496,497	5154479250	5154479250	EL. CAP. 4.7uF/50V,+-20%
C498	5154100225	5154100225	EL. CAP. 10uF/25V,+-20%
C499	7306010055	7306010055	EL. CAP. 10pF/50V,+-5%
C4001	7308622345	7308622345	Mult. CAP. .022uF/16V,+80/-20%
C4002	5121100852	5121100852	EL. CAP. 10pF,+-0.5PF
C4003	5154479250	5154479250	EL. CAP. 4.7uF/50V,+-20%
<u>RESISTORS</u>			
R401	4050122052	4050122052	RES. 22 ohm,1/6W
R402	4050120252	4050120252	RES. 2K ohm,1/6W
R404	4050147152	4050147152	RES. 470 ohm,1/6W
R405	4050110452	4050110452	RES. 100K ohm,1/6W
R406	4050130352	4050130352	RES. 30K ohm,1/6W
R408	4050147252	4050147252	RES. 4.7K ohm,1/6W
R409	4050110452	4050110452	RES. 100K ohm,1/6W
R410	4050120352	4050120352	RES. 20K ohm,1/6W
R411,412	4050110452	4050110452	RES. 100K ohm,1/6W
R413	4050147352	4050147352	RES. 47K ohm,1/6W
R414	4050115452	4050115452	RES. 150K ohm,1/6W
R415	4050139452	4050139452	RES. 390K ohm,1/6W
R416-418	4050110152	4050110152	RES. 100 ohm,1/6W
R419,420	4050147352	4050147352	RES. 47K ohm,1/6W
R421	4050110452	4050110452	RES. 100K ohm,1/6W
R422	4050191452	4050191452	RES. 910K ohm,1/6W
R423	4050168452	4050168452	RES. 680K ohm,1/6W
R424	4050110452	4050110452	RES. 100K ohm,1/6W
R425	4050110152	4050110152	RES. 100 ohm,1/6W
R426	4050147152	4050147152	RES. 470 ohm,1/6W
R427	4050115152	4050115152	RES. 150 ohm,1/6W
R428	4050282159	4050282159	RES. 820 ohm,1/2W
R429	4050175052	4050175052	RES. 75 ohm,1/6W
R430	4050439152	4050439152	RES. 390 ohm,1/6W
R431	4050133152	4050133152	RES. 330 ohm,1/6W
R432	4050110252	4050110252	RES. 1K ohm,1/6W
R433	4050147152	4050147152	RES. 470 ohm,1/6W
R434	4050133152	4050133152	RES. 330 ohm,1/6W
R435	4050168152	4050168152	RES. 680 ohm,1/6W
R436	4050175052	4050175052	RES. 75 ohm,1/6W
R437	4050122052	4050122052	RES. 22 ohm,1/6W
R438	4050133152	4050133152	RES. 330 ohm,1/6W
R439	4050433252	4050433252	RES. 3.3K ohm,1/4W
R440	4050118352	4050118352	RES. 18K ohm,1/6W

Symbol No.	Ref. No.	Part No.	Description
R441	4050110152	4050110152	RES. 100K ohm,1/6W
R442	4050118352	4050118352	RES. 18K ohm,1/6W
R443	4050133252	4050133252	RES. 3.3K ohm,1/6W
R444	4050110252	4050110252	RES. 1K ohm,1/6W
R445	4050122452	4050122452	RES. 220K ohm,1/6W
R446	4050133152	4050133152	RES. 330 ohm,1/6W
R447,448	4050110352	4050110352	RES. 10K ohm,1/6W
R449	4050110152	4050110152	RES. 100 ohm,1/6W
R450	4050115252	4050115252	RES. 1.5K ohm,1/6W
R451	4050427252	4050427252	RES. 2.7K ohm,1/6W
R453	4050110352	4050110352	RES. 10K ohm,1/6W
R454	4050147252	4050147252	RES. 4.7K ohm,1/6W
R455	4050110352	4050110352	RES. 10K ohm,1/6W
R456	4050122452	4050122452	RES. 220K ohm,1/6W
R457	4050110352	4050110352	RES. 10K ohm,1/6W
R458	4050151252	4050151252	RES. 5.1K ohm,1/6W
R459	4050420352	4050420352	RES. 20K ohm,1/4W
R460	4050122352	4050122352	RES. 22K ohm,1/6W
R461	4050182052	4050182052	RES. 82 ohm,1/6W
R462	4050422352	4050422352	RES. 22K ohm,1/6W
R463	4050115352	4050115352	RES. 15K ohm,1/6W
R464	4050130352	4050130352	RES. 30K ohm,1/6W
R465,466	4050410352	4050410352	RES. 10K ohm,1/4W
R468	4050122052	4050122052	RES. 22 ohm,1/6W
R469	4050127252	4050127252	RES. 2.7K ohm,1/6W
R470	4050127252	4050127252	RES. 2.7K ohm,1/6W
R471	4050120352	4050120352	RES. 20K ohm,1/6W
R472	4050110352	4050110352	RES. 10K ohm,1/6W
R473	4050133252	4050133252	RES. 3.3K ohm,1/6W
R474	4050447052	4050447052	RES. 47 ohm,1/4W
R475	4050433352	4050433352	RES. 33K ohm,1/4W
R476	4050430252	4050430252	RES. 30K ohm,1/4W
R477	4050420252	4050420252	RES. 2K ohm,1/4W
R478	4050120352	4050120352	RES. 20K ohm,1/6W
R479,480	4050182352	4050182352	RES. 82K ohm,1/6W
R481,482	4050168252	4050168252	RES. 6.8K ohm,1/6W
R483,484	4050127252	4050127252	RES. 2.7K ohm,1/6W
R485,486	4050133252	4050133252	RES. 3.3K ohm,1/6W
R487,488	4050115352	4050115352	RES. 15K ohm,1/6W
R489,490	4050147252	4050147252	RES. 4.7K ohm,1/6W
R491,492	4050182152	4050182152	RES. 820 ohm,1/6W
R493,494	4050110352	4050110352	RES. 10K ohm,1/6W
R495	4050115352	4050115352	RES. 15K ohm,1/6W
R496	4050422052	4050422052	RES. 22 ohm,1/4W
R497,498	4050122352	4050122352	RES. 22K ohm,1/6W
R499	4050168352	4050168352	RES. 68K ohm,1/6W
R4001-4006	4050110352	4050110352	RES. 10K ohm,1/6W
R4008	4050110352	4050110352	RES. 10K ohm,1/6W
R4009	4050127352	4050127352	RES. 27K ohm,1/6W
R4010	4050122152	4050122152	RES. 220 ohm,1/6W
R4011,R4012	4050110252	4050110252	RES. 1K ohm,1/6W
R4013	4050147352	4050147352	RES. 47K ohm,1/6W
R4014	4050122352	4050122352	RES. 22K ohm,1/6W
R4015	4050147352	4050147352	RES. 47K ohm,1/6W
R4016	4050147352	4050147352	RES. 47K ohm,1/6W
R4017	4050110352	4050110352	RES. 10K ohm,1/6W

Symbol No.	Ref. No.	Part No.	Description
VARIABLE RES.			
SFR402	VZ068TLT	5226203T56	VAR. RES. 20KX ,Signal meter level adjustment
SFR402 or	VZ068TLT	5226203177	VAR. RES. 20KX
SFR403	VZ068TLT	5226503T56	VAR. RES. 50KX,Separation adjustment
TRIMMER			
TC404,405	5010300055	5010300055	Trimmer 30p
DIODES			
D401	1SV099	41201SV099	1SV099
D402-405	1SV55	4120400550	1SV55
D406,407	1N60	4120100600	1N60
D410,411	SVC321-SPA	4130003215	SVC321-SPA
COILS			
L401	1uH	4325010992	Peaking coil
L402	FM OSC coil	4330400830	FM OSC coil
L403	1uH	4325010992	Peaking coil
L404	2.2uH	4325022992	Peaking coil
L406	2.2uH	4325022992	Peaking coil
FL401,402	SFE10.7ML-A	4160200157	Ceramic filter
FL404	SFZ450G3L	4160500155	Ceramic filter
FL405	TWS-358-736	4169705233	AM filter
FL406	TWS-358-735	4169705224	Mpx filter
FL407,408	Mpx filter	4360400510	Mpx filter
T401-403	E525HNS-200055	4310400880	FM RF coil
T404	119AC-30099R	4340201570	FM IFT
T405	TWS-358-732	4310100870	AM RF coil
T406	TWS-358-731	4330101960	AM OSC coil
T407	TWS-358-730	4340101360	AM IFT coil
T408	TWS-358-734	4340201550	FM IFT (A),Quad coil
T409	TWS-358-733	4340201560	FM IFT (B),Quad coil
MISCELLANEOUS			
CN-1B	4490501004	4490501004	Male connector PH 5P
CN-11B	4490301004	4490301004	Male connector PH 3P
CN-14A	4491201004	4491201004	Male connector PH 12P
X401	**7.2MHz**	**4100903240**	**Crytal**
X402	**CSB456F11**	**4160500161**	**Ceramic filter**

Speaker-A terminal PCB assembly

PC BOARD			
	4145216530	4145216530	PCB no components
	C145216530	C145216530	PCB assembly
CAPACITORS			
C139,140	7307110315	7307110315	Mult. CAP. .01uF/16V
C155,156	7307822215	7307822215	Mult. CAP. .0022uF/16V
JACKS			
JK103	4560004083	4560004083	4P speaker terminal (For speaker A)

Push PCB assembly

Symbol No.	Ref. No.	Part No.	Description
PC BOARD			
	4145216540	4145216540	PCB no components
	C145216540	C145216540	PCB assembly
CAPACITORS			
C31,32	5114152550	5114152550	Mylar. CAP. .0015uF/50V
C33,34	5154109250	5154109250	EL. CAP. 1uF/50V
RESISTORS			
R43,44	4050168252	4050168252	RES. 6.8K ohm,1/6W
R45,46	4050151152	4050151152	RES. 510 ohm,1/6W
R53,54	4050168252	4050168252	RES. 6.8K ohm,1/6W
SWITCHES			
S2A,B	SPUN22A208	4432000635	Push switch
MISCELLANEOUS			
CN-10A	4490600261	4490600261	Wire holder 6P20
Volume PCB assembly			
PC BOARD			
	4145216550	4145216550	PCB no components
	C145216550	C145216550	PCB assembly
VARIABLE RES.			
VR1	RK16312MC019	5025214185	VR 10KBx2, Volume
MISCELLANEOUS			
CN-10B	4490600261	4490600261	Wire holder 6P20
Display PCB assembly			
PC BOARD			
	4146216720	4146216720	PCB no components
	C146216720	C146216720	PCB assembly
ICS			
IC706	LC7582	4152075820	LCD Drive
LCD			
LCD701	HLC8108-014210	4110440179	LCD display
CAPACITORS			
C707	7306568115	7306568115	Mult. CAP. 680pF/50V
RESISTORS			
R725	4050147352	4050147352	RES. 47K ohm,1/6W
MISCELLANEOUS			
CN-16B	4490200261	4490200261	Wire holder 2P20
CN-17B	4490300261	4490300261	Wire holder 3P20

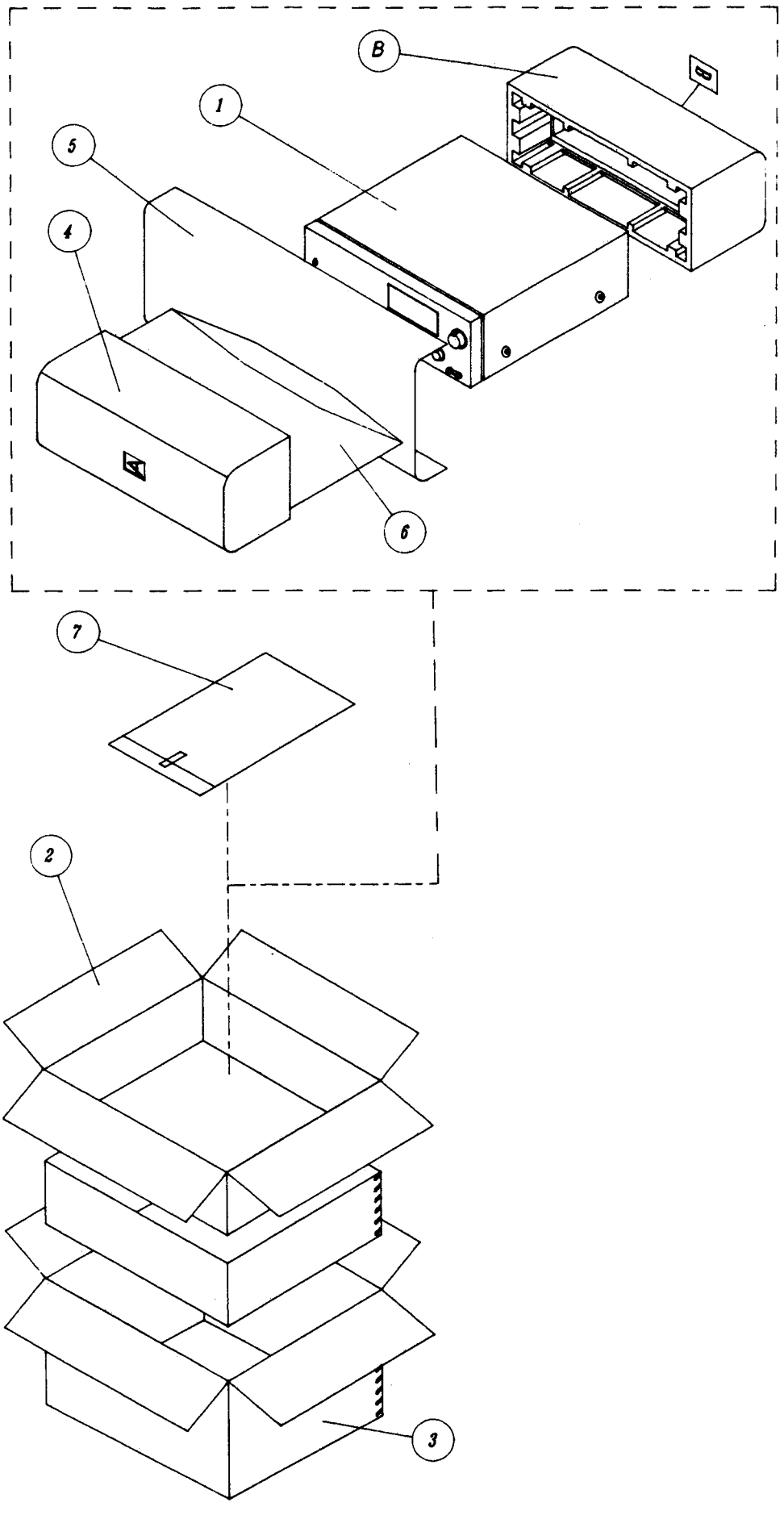
SUB Transformer PCB assembly

Symbol No.	Ref. No.	Part No.	Description
PC BOARD	4146216740	4146216740	PCB no components
	C146216740	C146216740	PCB assembly
ICS			
IC304	MC7805CT	4157078053	Regulator
TRANSISTORS			
Q310,311	2SC945P	410020945P	Switching
DIODES			
D312,313	1N4148	4120141480	1N4148
D314	1N4002L	4138104002	1N4002L
D315	W02M	4130150022	W02M
CAPACITORS			
C320	5104223452	5104223452	Cer CAP. .022uF/50V,+80/-20%
C321	5154470225	5154470225	EL. CAP. 47uF/25V,+-20%
C322	5154102225	5154102225	EL.CAP. 1000uF/25V,+-20%
C323	5154470216	5154470216	EL. CAP. 47uF/16V,+-20%
C324	5154100225	5154100225	EL. CAP. 10uF/25V,+-20%
RESISTORS			
R001	4060233519	4060233519	RES. 3.3M ohm,1/2W,Solder
R324	4050410252	4050410252	RES. 1K ohm,1/4W
R325	4050110452	4050110452	RES. 100K ohm,1/6W
R326	4050133352	4050133352	RES. 33K,1/6W
COILS			
T301	EI-41	420A419280	SUB Transformer
MISCELLANEOUS			
CN-4B	4490501004	4490501004	Male connector PH 5P
E1	4692000034	4692000034	Fuse holder PFC5000-0202T
E2	4631372070	4631372070	AC cord F type (UL,CSA)
E3	4631372070	4631372070	AC cord Din type (UK)
E4	4634212080	4634212080	AC cord Din type (AY)
E5	4632212075	4632212075	AC cord VDE 7.5F BLK
E6	4679500023	4679500023	Antenna Converter AJ-2010 (UL,CSA)
E7	4679705033	4679705033	Antenna Converter AJ-2020 (UK)
RL301	VS-12MB-VD3	4390000022	Relay

TROUBLESHOOTING GUIDE

CIRCUIT	SYMPTOM	CAUSE	REMEDY
GENERAL	NO SOUND (Unit does not work at all)	Defective ON/OFF switch.	Replace or repair as required.
		Defective band selector switch.	Replace or repair as required.
		Defective volume control.	Check volume control resistance for continuous operation. Replace if necessary.
		Defective speaker.	Replace speaker.
		Defective speaker jack.	Replace or repair jack.
AM	NO SOUND	Defective band selector switch.	Replace or repair switch.
		Defect in IFT T407	Check voltage and current for this circuit.
		Open circuit of AM IF transformer.	Check resistance.
		Defective AM ant. coil, or OSC. coil.	Replace if necessary.
	WEAK SOUND (Low sensitivity)	IF tuning faulty.	Readjust (see Alignment instructions).
		RF tracking faulty.	Readjust (see Alignment instructions).
		Defective IC401	Check voltages. Replace if necessary.
		Poor contact in antenna circuit.	Check resistance. and resolder.
FM ●No FM MPX separation ●No stereo light or FM stereo does not work	NO SOUND	Defective band selector switch.	Replace or repair the switch.
		Open circuit of FM ant. coil, or OSC. coil.	Check resistance. Replace if necessary.
	WEAK SOUND (Low sensitivity)	Defect in FM tuner circuit.	Check RF, IF and detector circuit. Check voltage and current of transistors. Replace parts if necessary and readjust FM tuner.
		IF tuning faulty.	Check the function of IC401.
		RF tracking faulty.	Readjust (see Alignment instructions).
		Defective IC401	Check voltage and current
		Poor contact in FM antenna circuit.	Resolder or repair as required.

Packing Diagram



PACKING LIST FOR NAD-705

ITEM	PARTS NO.	NAME
1	9705-1,5	SET
2	9002079705	GIFT BOX
3	9003079705	NASTER CARTON
4	9001079705	SNOW BOX (F)
5	9004038401	SOFT SHEET
6	9906006040	POLY BAG 60x60
7	9080019150	INSTRUCTION BOOK
8	9004079705	SNOW BOX (B)

NOTES:

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